CONESTOGA-ROVERS & ASSOCIATES

651 Colby Drive, Waterloo, Ontario, Canada N2V 1C2
Telephone: (519) 884-0510 Facsimile: (519) 884-0525
www.CRAworld.com

June 10, 2010 Reference No. 056393

Mr. Michael Berkoff
Remedial Project Manager
U.S. Environmental Protection Agency – Region V
Superfund Division, Remedial Response Section #2
77 West Jackson Boulevard (SR – 6J)
Chicago, Illinois 60604 – 3590

Dear Mr. Berkoff:

Re: Remedial Action Monthly Progress Report No. 3 – May 2010
12th Street Landfill Operable Unit No. 4
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Allegan and Kalamazoo County

As required by Task 4, Progress Reports in the Statement of Work for the Remedial Design and Remedial Action at the 12th Street Landfill Operable Unit No. 4, please find attached three copies of the Progress Report No. 3 for the period of May 1, 2010 through May 31, 2010.

Should you have any questions or require any additional information, please do not hesitate to contact the undersigned.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Gregory A. Carli, P. E.

AS/cs/19

cc: J. Saric (U.S. EPA) - electronic only
L. Kirby-Miles (U.S. EPA) - electronic only
S. Chummar (U.S. EPA) - electronic only
T. Prendiville (U.S. EPA) - electronic only
S. Borries (U.S. EPA) - electronic only
R. Frey (U.S. EPA) - electronic only
S. Hutsell (CH2MHILL) – electronic only
P. Bucholtz (MDNRE) – three hard copies
K. Zakrzewski (MDNRE) - electronic only
R. Gay (Weyerhaeuser) – electronic only
M. Lebo (Weyerhaeuser) - electronic only
J. Jackowski (Weyerhaeuser) - electronic only
M. Erickson (Arcadis) - electronic only
D. Penniman (Arcadis) – electronic only
G. Griffith (Georgia-Pacific LLC) – electronic only
J. Keiser (CH2M Hill) - electronic only
J. Dembowske (CRA) – electronic only
A. Stadnyk (CRA) – electronic only

Remedial Action Progress Report No. 3
May 1, 2010 to May 31, 2010

Remedial Design and Remedial Action
12th Street Landfill, Operable Unit No. 4
Ostego, Michigan

This progress report is being submitted to the United States Environmental Protection Agency (U.S. EPA) in accordance with Task 4: Progress Reports and the Summary of Major Deliverables/Schedule contained in the Statement of Work for the Remedial Design and Remedial Action pursuant to the terms of the Consent Decree for the Design and Implementation of Certain Response Action at Operable Unit No. 4 and the Plainwell, Inc. Mill Property (Site) of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Consent Decree) which became effective February 22, 2005.

1. WORK PERFORMED

- The Pre-Construction meeting was held on May 6, 2010. Attendees included U.S. EPA, Michigan Department of Natural Resources and Environment (MDNRE), CH2MHill, Weyerhaeuser NR Company (Weyerhaeuser), Conestoga-Rovers & Associates (CRA), and CRA Services (the construction division of CRA).
- The following field activities have commenced and/or have been completed during the May 2010 reporting period:
  - Mobilization of additional heavy equipment and supplies to the Site.
  - Completion of Site vegetation clearing. As of May 31, 2010, approximately 95 percent of cleared tree stumps and vegetative debris have been transported off Site for disposal.
  - Mobilization of Site trailers and established electricity to the Site.
  - Installation of erosion and sedimentation controls.
  - Setup of Site facilities and operations, included fencing to demark work areas, Site entrances, and personnel and equipment decontamination facilities.
  - Establishment of Site security (24 hours per day, 7 days per week).
  - Continual and on-going verification surveying of landfill and surrounding areas.
  - Completion of test pits on the north and southwest limits of the landfill in order to investigate the presence of the natural gas pipeline.
  - Commencement of excavation, placement, grading, and tilling of paper residuals from the on-property wetland areas on to the landfill surface.
  - Completion of Proctor testing on representative samples of materials encountered at the Site. One proctor was conducted on a mix of paper residuals, wetland material topsoil,

fly ash and sand (on site) and another was conducted on the sand alone. The proctors were followed by regular and on-going compaction testing.

- Commencement of rough grading of the north, northeastern and southeastern side slopes of the landfill.
- Assembly of the temporary Water Treatment Plant.

- Submittal of the Soil Erosion and Sedimentation Control (SESC) Application to the Allegan County Health Department.
- The revised Quality Assurance Project Plant (QAPP), requesting Columbia Analytical Services to be able to conduct all parameter groups associated with the analytical analysis as part of the verification sampling program at the Site, was submitted to U.S. EPA on May 13, 2010.

2. DATA RECEIVED

- Initial Proctor testing results for the following samples was submitted to U.S. EPA on May 12, 2010:
    1. Fly Ash obtained from the berm of the existing landfill - initial moisture content 37 percent
    2. Paper residuals obtained from the Asphalt Plant Property area - initial moisture content 136 percent
    3. Paper residuals (from the Asphalt Plant Property) modified by addition of 2 percent Portland Cement and 6 percent common fill - initial moisture content after mixing 97 percent.

  The memorandum summarizing the results for the above noted samples is provided in Attachment A
- Additional Proctor testing was preformed on the following representative samples of paper residuals beginning on May 27, 2010:
    1. Mixed-Soil material comprised of topsoil, fly ash, paper residuals and sand obtained from the lift placed for compaction.
    2. Sand material obtained from the berms of the existing landfill.

The memorandum summarizing the results for the above noted samples is provided in Attachment B

- Analytical laboratory results for the three 55-gallon steel drums containing investigation derived liquid waste (approximately 15 gallons) have been obtained. The water was determined to be non-hazardous and non-TSCA regulated. A copy of the laboratory report is provided in Attachment C.
- The two (2) partial drums of investigation derived solid waste (paper residuals and Geoprobe macro-core sand catchers/caps) were emptied onto the Site and mixed with the other paper residuals. The drums were crushed and buried with other materials at the Site.

3. MODIFICATIONS TO WORK PLANS OR OTHER SCHEDULES PROPOSED TO, OR APPROVED BY, THE U.S. EPA

- No modification to work plans or the project schedule has been made during this reporting period.
- A design variance submitted to U.S. EPA, in a letter dated May 12, 2010, for the use of an alternative silt fence material as the outer silt fence row. Based on the limited available supply of the specified silt fence material, CRA requested that another alternative silt fence material be incorporated into the project works, in order to maintain and meet the project schedule.

4. PROBLEMS ENCOUNTERED AND PLANNED RESOLUTION

- Based on field conditions, the materials excavated from the on-property wetlands have consisted of a more heterogeneous mixture of paper residuals, sand, fly ash and wetland organics (i.e., vegetation, peat, and soil) than has been anticipated. The initial compaction test results were found to not meet 90 percent compaction, in accordance with the design specifications and based on the Proctor test results for paper residuals.

  To resolve this issue, CRA Services began thoroughly tilling/disking the heterogeneous materials, with a piece of agricultural equipment, during the placement and compaction of each lift across the landfill. The tilling/disking homogenized the materials and assisted in drying the materials out prior to compaction. An additional Proctor test was then performed on a representative sample of the heterogeneous mixture. Based on the Proctor

test results for the representative sample, all field testing have yielded greater than 90 percent compaction.

- It should be noted that during this reporting period, work at the Site was stopped due to inclement weather conditions for a total of five days; however CRA Services has remained slightly ahead of schedule

5. WORK ANTICIPATED DURING THE NEXT REPORTING PERIOD

- In accordance with the RAWP, the following field activities are scheduled to start during the June 2010 reporting period:
  - Continue relocating waste residuals from Wetland Area on Site
  - Backfill wetland area on Site
  - Construct temporary access road to access the Asphalt Plant Property, as necessary
  - Begin relocating waste residuals from the Asphalt Plant Property
  - Commence Verification Sampling Program on the excavated areas of the Asphalt Plant Property

6. ANTICIPATED DEVELOPMENT WITH WORK DURING THE NEXT PERIOD

- Continue to hold weekly conference calls and/or meetings between U.S. EPA and Project Technical Team.
- A meeting has been tentatively scheduled for September 8, 2010, to discuss the start of the liner installation

7. OTHER RELEVANT INFORMATION

- It should be noted that due to inclement weather conditions, the Site will shut down all major operations for the week of June 9 through to June 16, 2010. During this time CRA Services will remain at the Site, with an adjusted work force, to conduct inspections and maintenance of the Site, specifically the soil erosion and sedimentation controls

ATTACHMENT A

MAY 12, 2010 MEMORANDUM
INITIAL PROCTOR RESULTS

CONESTOGA-ROVERS & ASSOCIATES

651 Colby Drive, Waterloo, Ontario, Canada N2V 1C2
Telephone: (519) 884-0510 Fax: (519) 884-0525
www.CRAworld.com

MEMORANDUM

TO:	Greg Carli	REF. NO.:	056393
FROM:	Aaron Stadnyk/Hassan Gilani/cs/3	DATE:	May 12, 2010
CC:	Rick Heokstra, Jodie Dembowske, Pete Lewis, Renee Pionk		
RE:	**Proctor Test Results - Remedial Action 12th Street Landfill Operable Unit No. 4 Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site Allegan and Kalamazoo County**		

The following memorandum has been prepared to document the results of the Proctor Tests that were performed at the 12th Landfill Operable Unit No. 4 of the Allied Paper/Portage Creek/Kalamazoo River Superfund Site (Site). The following was prepared in consultation with Inspec-Sol.

In order to determine the moisture-density relationships of the on-Site materials for compaction control, standard Proctor tests were carried out in accordance with the ASTM Standard D 698 on the following three on-site samples:

1. Fly Ash obtained from the berm of the existing landfill - initial (in-situ) moisture content 37 percent
2. Paper sludge material obtained from the Asphalt Plant Property area - in-situ moisture content 136 percent
3. Same sample as #2 (paper sludge) modified by addition of 2 percent Portland Cement and 6 percent common fill - initial moisture content after modification 97 percent

The first test performed on Sample 1 - Fly Ash was carried out using the normal testing procedure, involving adding moisture to the material for each stage of the test until a suitable curve showing maximum dry density (MDD) and optimum moisture content (OMC) values of 48.4 pounds per cubic foot (pcf) and 55 percent respectively were obtained.

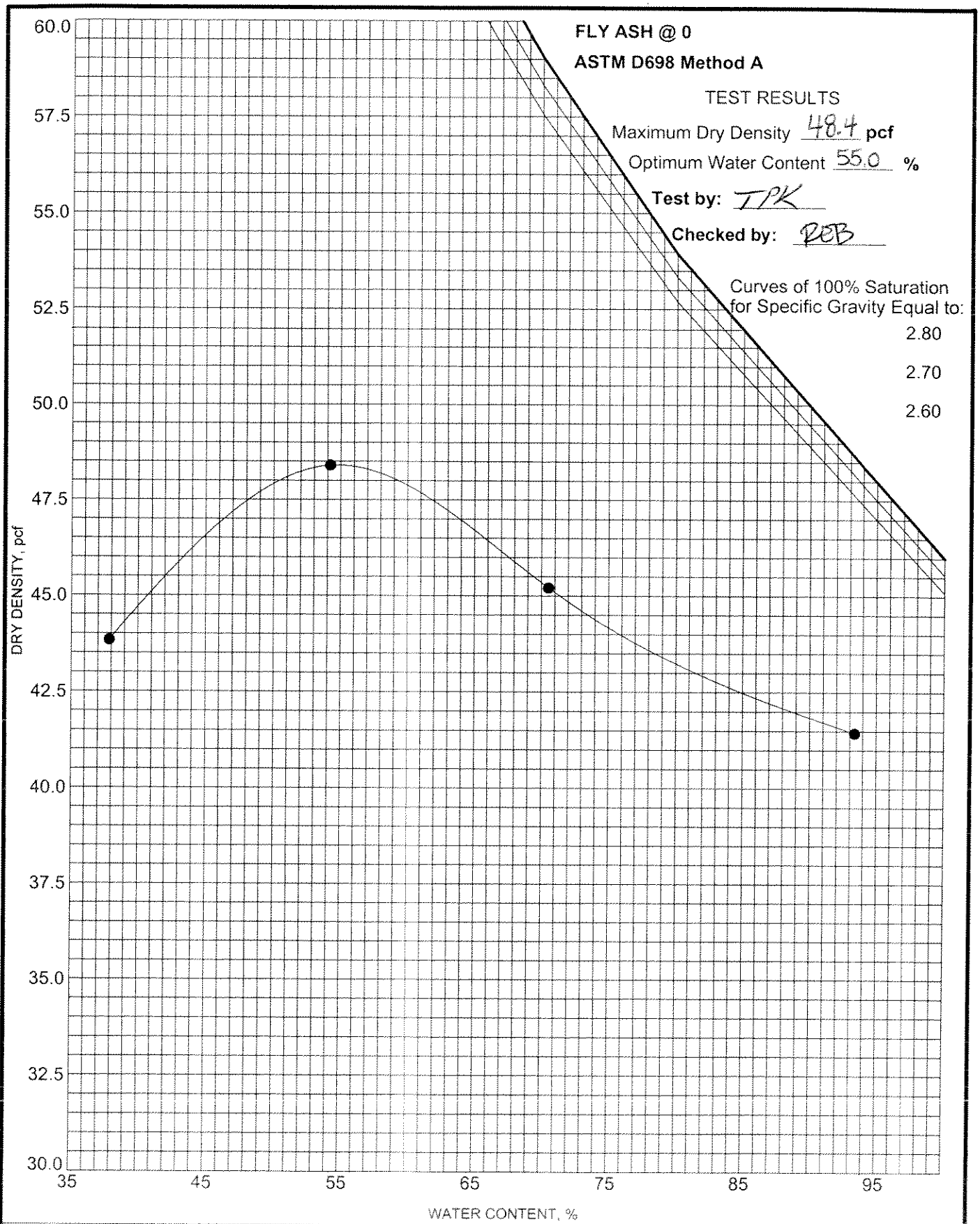
For Samples 2 and 3, the normal testing procedure was modified to determine the moisture-density relationship of paper sludge and modified paper sludge materials. The materials were air dried for each stage of the respective Proctor tests from the high (in-situ or initial) to lower moisture values. The materials thus air dried were then compacted using Method A of ASTM D698. For paper sludge material the MDD is 56.5 pcf and the OMC is 60 percent. For the modified paper sludge material the MDD is 57.8 pcf and the OMC is 38 percent.

The Proctor Test results are provided in Attachment A. It is noted here that for the paper sludge and modified paper sludge materials, it typically took one to two days of air-drying for each stage of 20 to 30 percent reduction in the moisture content.

A review of the above described test procedure shows that addition of modifying agents did not increase the MDD significantly nor reduced the overall test time, therefore, paper sludge material without additives can be used.

ATTACHMENT A

PROCTOR TEST RESULTS

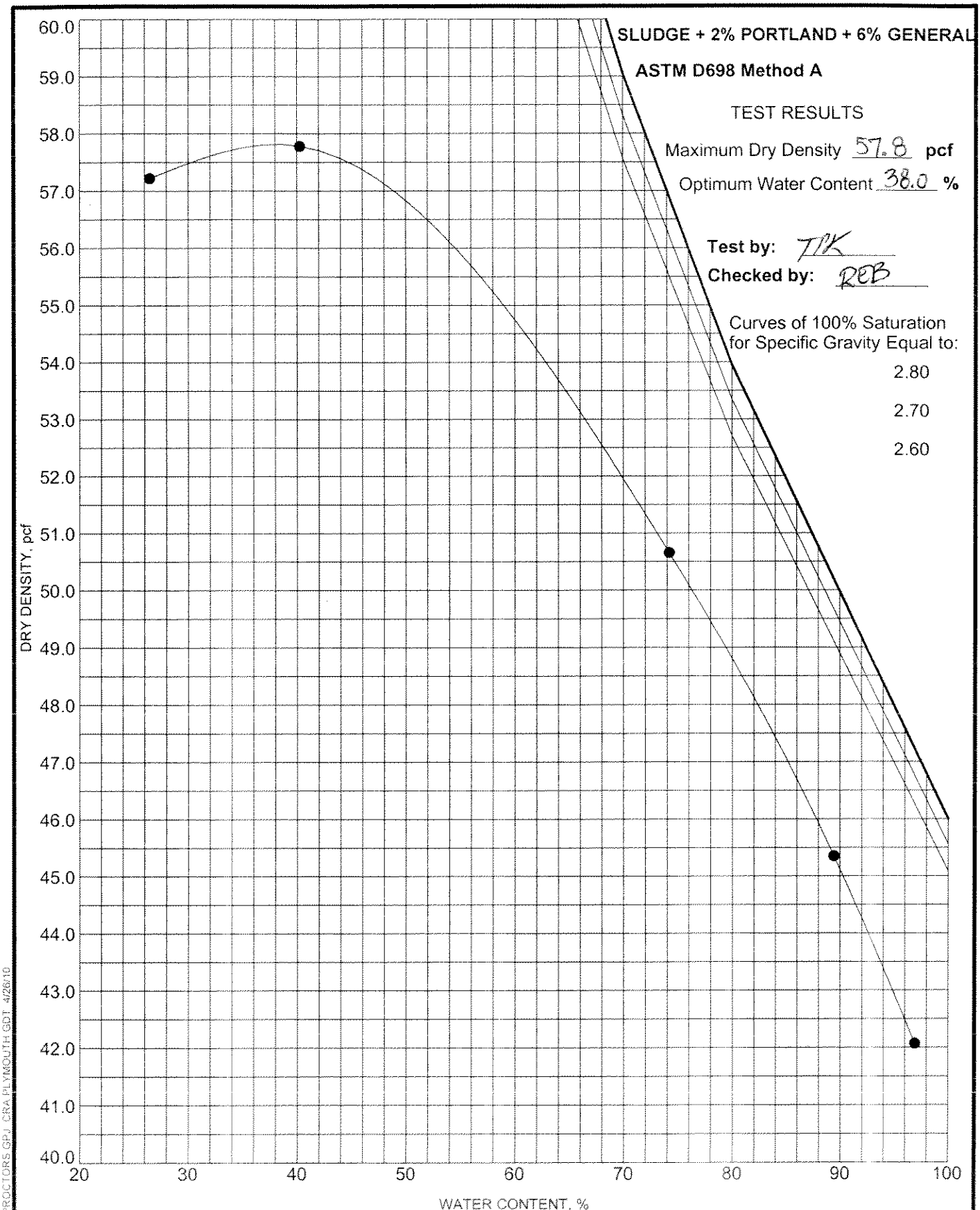


INSPECSOL ENGINEERING INC.
MEMBER OF THE CRA FAMILY OF COMPANIES

MOISTURE-DENSITY RELATIONSHIP

Project Name: 12th Street Landfill
Project Number: 56393-07-002
Client: Weyerhauser
Location: Ostego, MI

COMPACTION 056393-07 PROCTORS.GPJ CRA PLYMOUTH.GDT 4/27/10

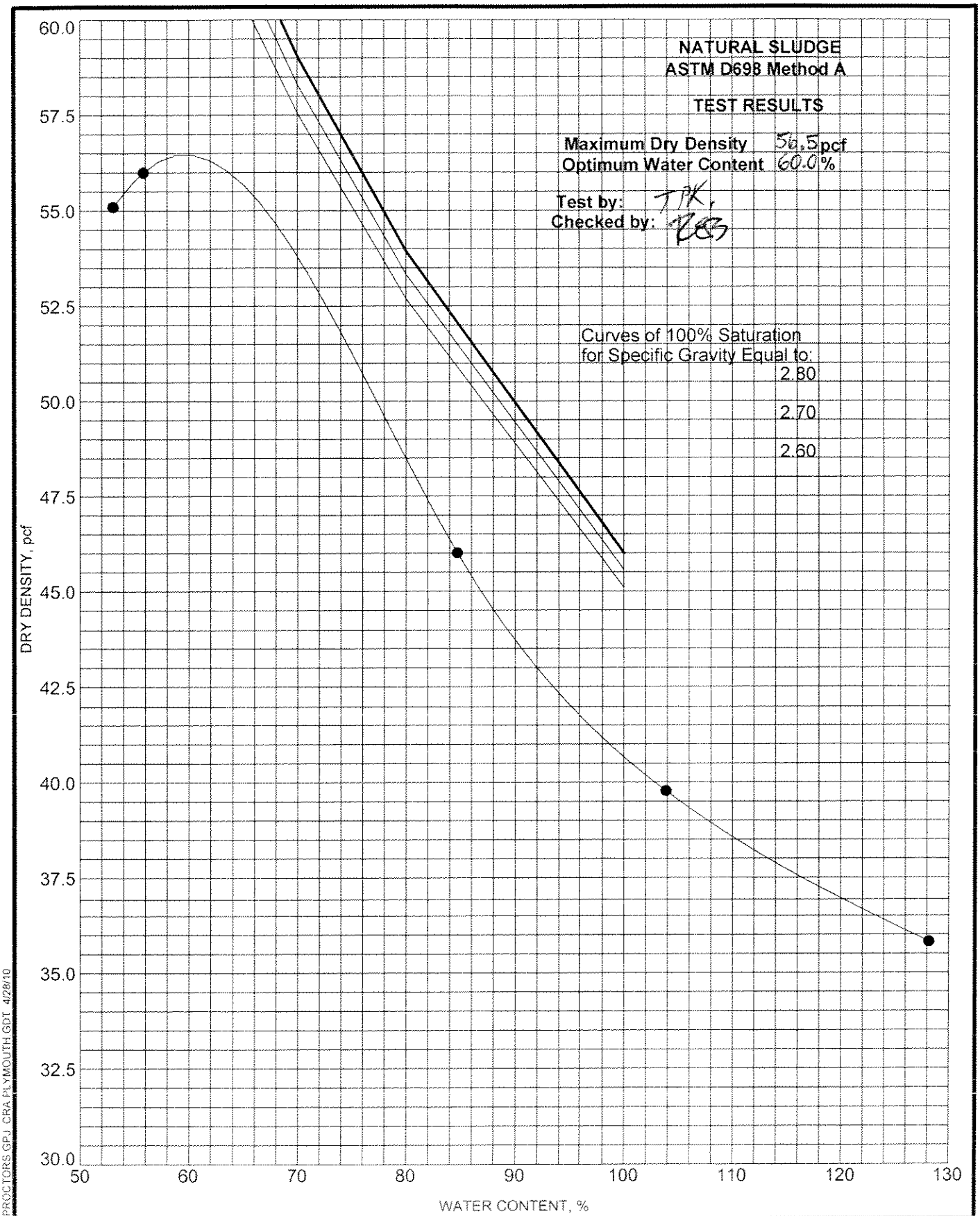


INSPECSOL ENGINEERING INC.
MEMBER OF THE CRA FAMILY OF COMPANIES

MOISTURE-DENSITY RELATIONSHIP

Project Name: 12th Street Landfill
Project Number: 56393-07-002
Client: Weyerhauser
Location: Ostego, MI

\\COMPACTION\56393-07 PROCTORS.GPJ CRA PLYMOUTH.GDT 4/26/10



INSPECSOL ENGINEERING INC.
MEMBER OF THE CRA FAMILY OF COMPANIES

MOISTURE-DENSITY RELATIONSHIP

Project Name: 12th Street Landfill
Project Number: 56393-07-002
Client: Weyerhauser
Location: Ostego, MI

COMPACTION 056393-07 PROCTORS.GPJ CRA PLYMOUTH.GDT 4/28/10

ATTACHMENT B

JUNE 10, 2010 MEMORANDUM
SUPPLEMENTAL PROCTOR RESULTS

CONESTOGA-ROVERS & ASSOCIATES

651 Colby Drive, Waterloo, Ontario, Canada N2V 1C2
Telephone: (519) 884-0510 Fax: (519) 884-0525
www.CRAworld.com

MEMORANDUM

TO:	Greg Carli	REF. NO.:	056393
FROM:	Aaron Stadnyk/Hassan Gilani/cs/5	DATE:	June 10, 2010
CC:	Rick Hoekstra Jodie Dembowske Pete Lewis Renee Pionk, CRA.		
RE:	**Proctor and Field Density Test Results** **12th Street Landfill – Operable Unit No. 4** **Allied Paper, Inc./ Portage Creek/ Kalamazoo River Superfund Site** **Plainwell, Michigan**		

The following memorandum has been prepared to document the results of the Proctor Tests that were performed at the 12th Landfill Operable Unit No. 4 of the Allied Paper/Portage Creek/Kalamazoo River Superfund Site (Site). The following was prepared in consultation with Inspec-Sol.

Two Proctor (ASTM D 698) have been carried out in addition to the three Proctor test results submitted with the Memorandum dated May 12, 2010. The Proctor test results were carried out on the samples of the following on-site materials:

1. Mixed-Soil material comprised of topsoil, fly ash, paper residuals, and sand obtained from the lift placed for compaction
2. Sand material obtained from the berms of the existing landfill

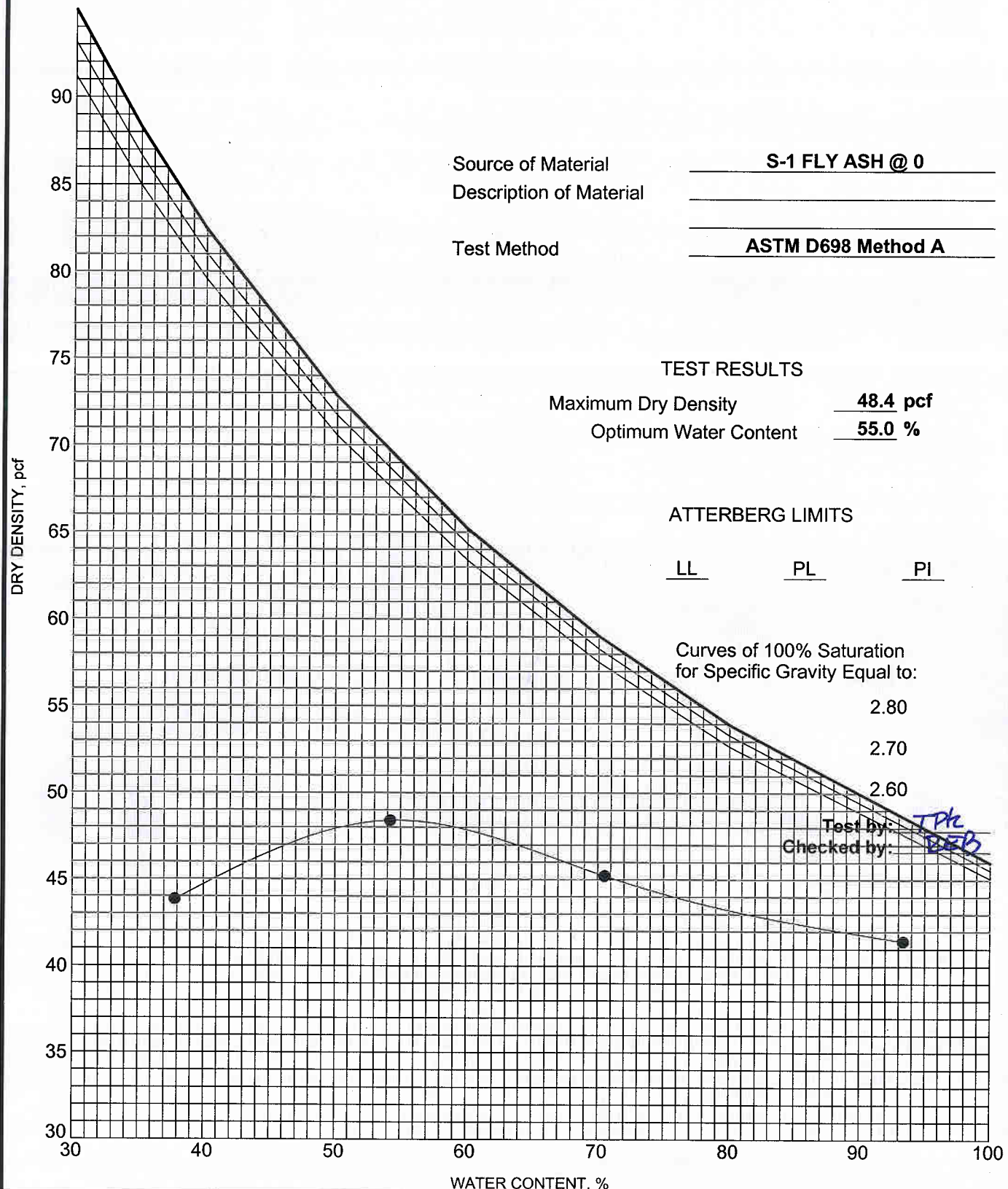
The maximum dry density (MDD) of the mixed material was determined to be 97.5 pcf with an OMC of 18.9 percent. The MDD of the sand was determined to be 123.1 pounds per cubic foot (pcf) with an optimum moisture content (OMC) of 10.8 percent. The test results are attached. A summary of the Proctor test results to-date is also attached.

The results of the in-situ density test results conducted on May 24, 2010 and June 4, 2010 are also attached for lifts No. 1 to 4 placed in the centre to north-east portion of the landfill. A plan showing the gridline locations referenced in the density test results sheets is also attached. A review of the test results shows that the lifts have been compacted to at least 90 percent of the MDD as required by the project specifications.

PROJECT .:	12th Street Landfill	CLIENT:	Weyerhaeuser Company
LOCATION:	Plainwell, Michigan	PROJECT NO.:	56393

Summary of Laboratory Standard Proctor Test Results

Material No.	Date Sampled	Material Description	Maximum Dry Density (ASTM D 698) (lbs/ft3)	Optimum Moisture Content (%)
1.	April 20, 2010	Paper Residuals (Asphalt Plant Area)	56.5	60.0
2.	April 20, 2010	Fly Ash (Landfill berm)	48.4	55.0
3	April 20, 2010	Paper Residuals+2%Portalnd cement+6% common fill	57.8	38.0
4.	May 27, 2010	Sand	123.1	10.8
5.	May 28, 2010	Topsoil+Flyash+Sand+Paper Residuals	97.5	18.9



Source of Material: S-1 FLY ASH @ 0

Description of Material:

Test Method: ASTM D698 Method A

TEST RESULTS

Maximum Dry Density: 48.4 pcf

Optimum Water Content: 55.0 %

ATTERBERG LIMITS

LL	PL	PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

Test by: TPC

Checked by: BEB

INSPECSOL ENGINEERING INC.
MEMBER OF THE CRA FAMILY OF COMPANIES

MOISTURE-DENSITY RELATIONSHIP

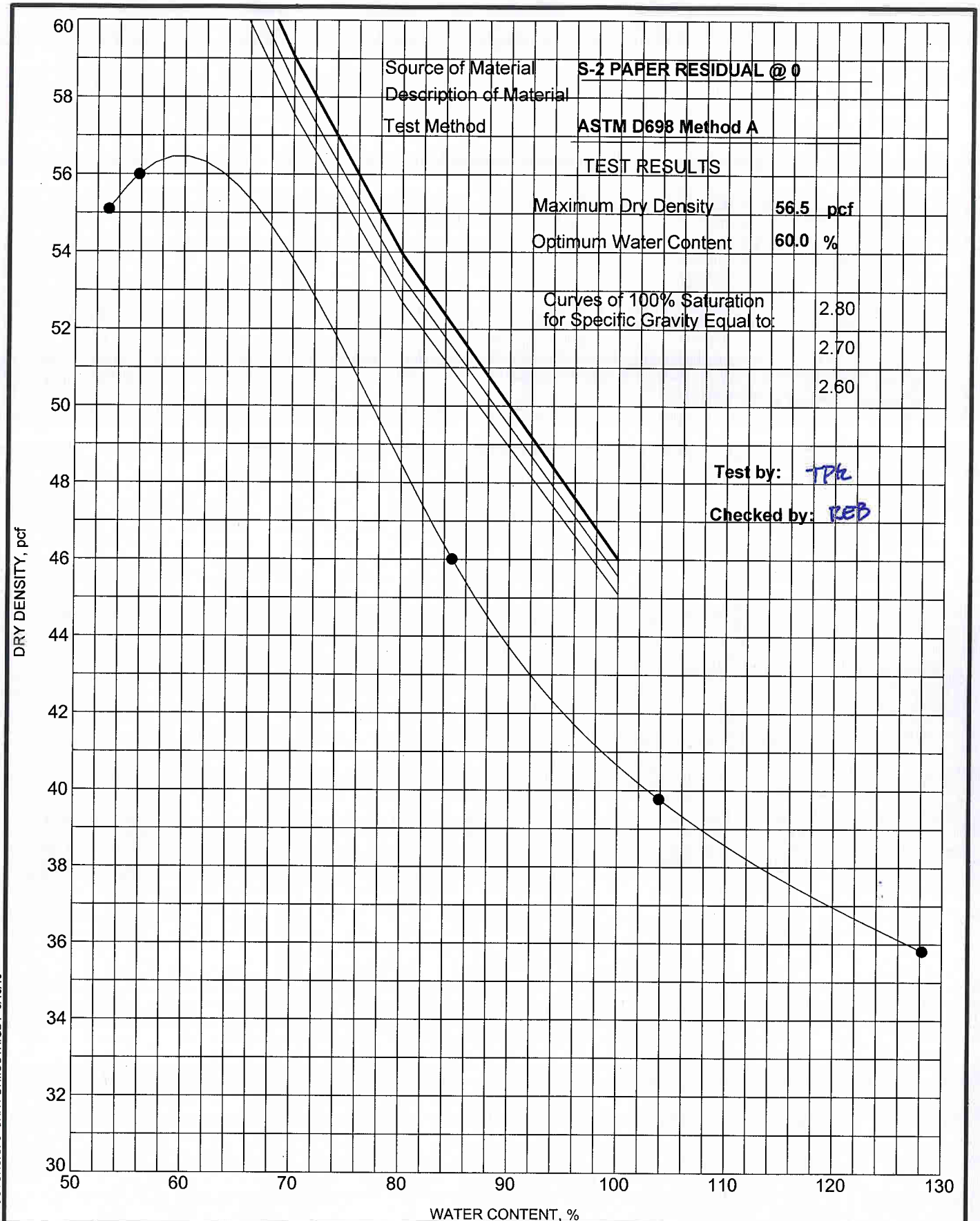
Project Name: 12th Street Landfill

Project Number: 56393-07-002

Client: Weyerhaeuser

Location: Plainwell, MI

COMPACTION 056393-07 PROCTORS.GPJ CRA PLYMOUTH.GDT 6/10/10

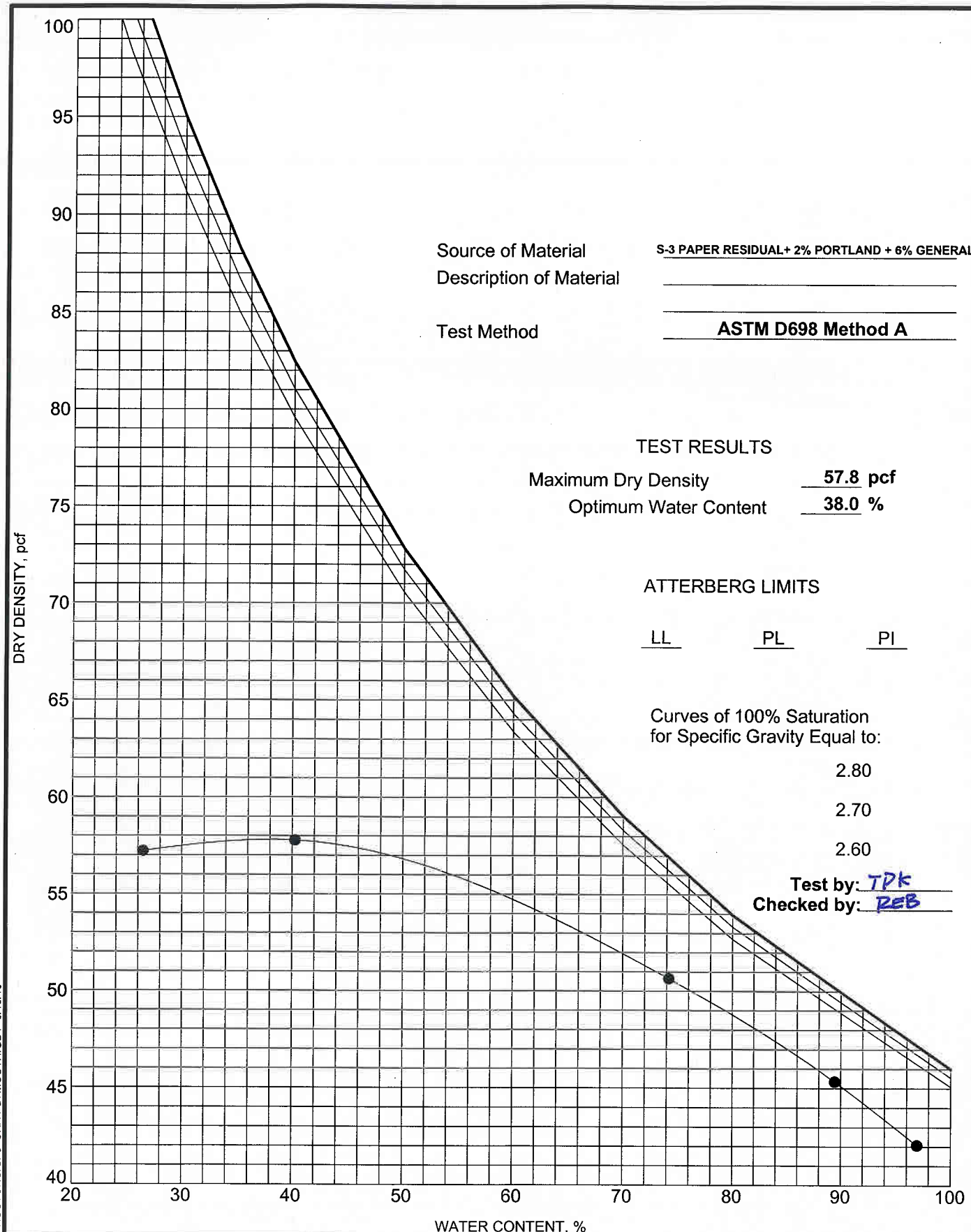


INSPECSOL ENGINEERING INC.
MEMBER OF THE CRA FAMILY OF COMPANIES

MOISTURE-DENSITY RELATIONSHIP

Project Name: 12th Street Landfill
Project Number: 56393-07-002
Client: Weyerhaeuser
Location: Plainwell, MI

COMPACTION 056393-07 PROCTORS.GPJ CRA PLYMOUTH.GDT 6/10/10



Source of Material: S-3 PAPER RESIDUAL+ 2% PORTLAND + 6% GENERAL

Description of Material:

Test Method: ASTM D698 Method A

TEST RESULTS

Maximum Dry Density: 57.8 pcf

Optimum Water Content: 38.0 %

ATTERBERG LIMITS

LL	PL	PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

Test by: TPK

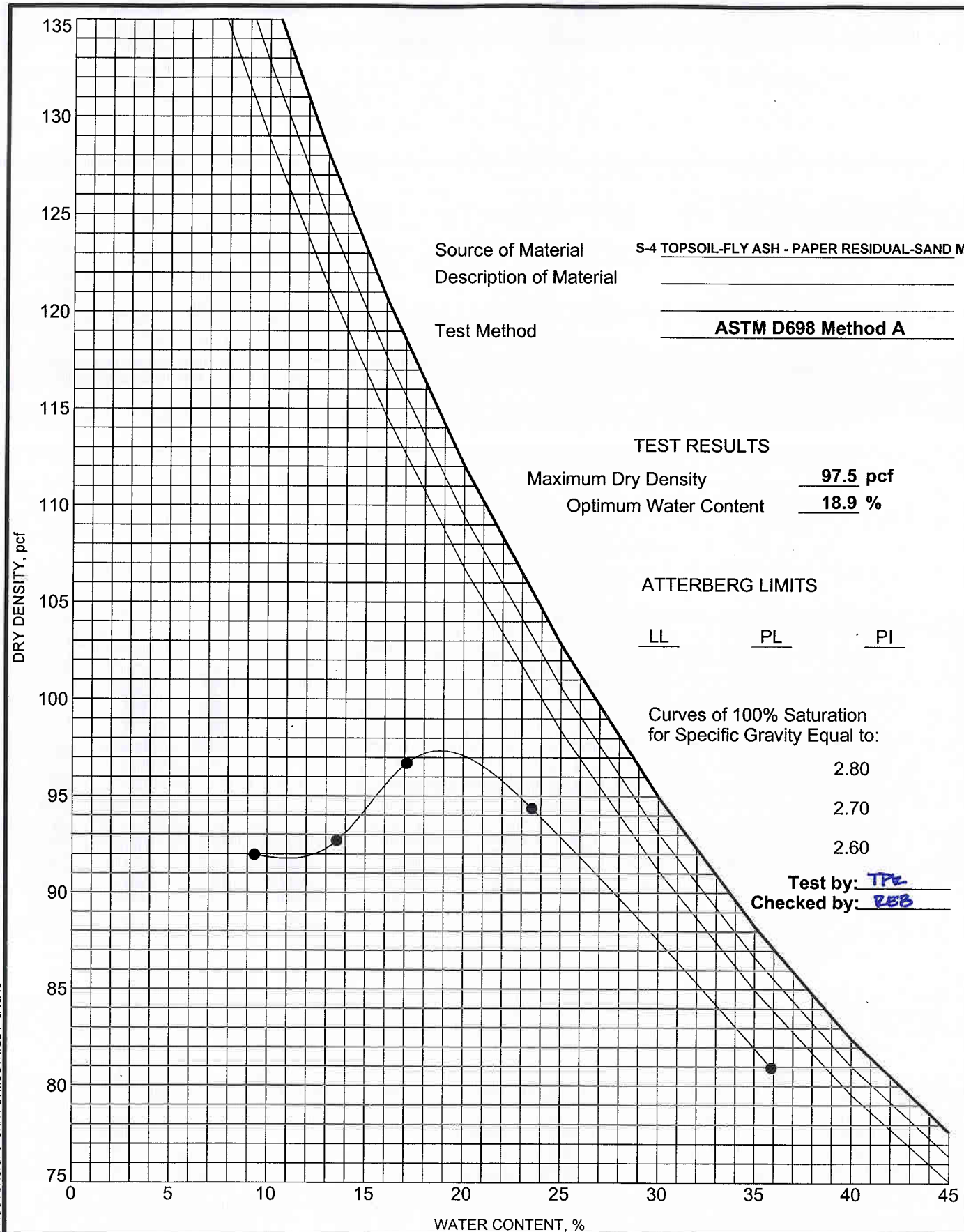
Checked by: REB

MOISTURE-DENSITY RELATIONSHIP

INSPECSOL ENGINEERING INC.
MEMBER OF THE CRA FAMILY OF COMPANIES

Project Name: 12th Street Landfill
Project Number: 56393-07-002
Client: Weyerhaeuser
Location: Plainwell, MI

COMPACTION 056393-07 PROCTORS.GPJ CRA PLYMOUTH.GDT 6/10/10



Source of Material: S-4 TOPSOIL-FLY ASH - PAPER RESIDUAL-SAND MIX

Description of Material:

Test Method: **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density: **97.5** pcf

Optimum Water Content: **18.9** %

ATTERBERG LIMITS

LL PL PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

Test by: TPE

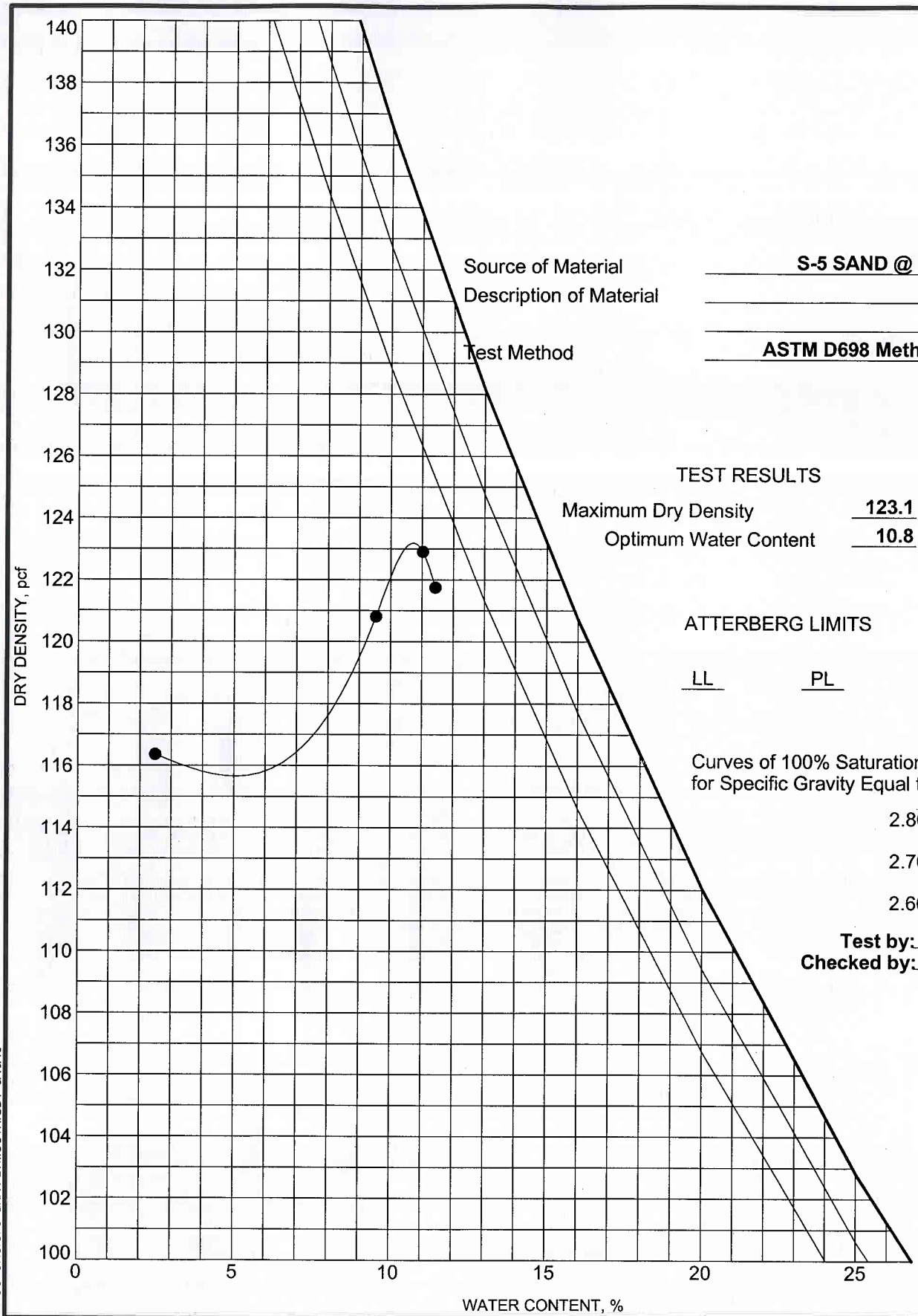
Checked by: REB

INSPECSOL ENGINEERING INC.
MEMBER OF THE CRA FAMILY OF COMPANIES

MOISTURE-DENSITY RELATIONSHIP

Project Name: 12th Street Landfill
Project Number: 56393-07-002
Client: Weyerhaeuser
Location: Plainwell, MI

COMPACTION 056393-07 PROCTORS.GPJ CRA PLYMOUTH.GDT 6/10/10



Source of Material: **S-5 SAND @ 0**

Description of Material:

Test Method: **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density: **123.1 pcf**

Optimum Water Content: **10.8 %**

ATTERBERG LIMITS

LL PL PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

Test by: TPL

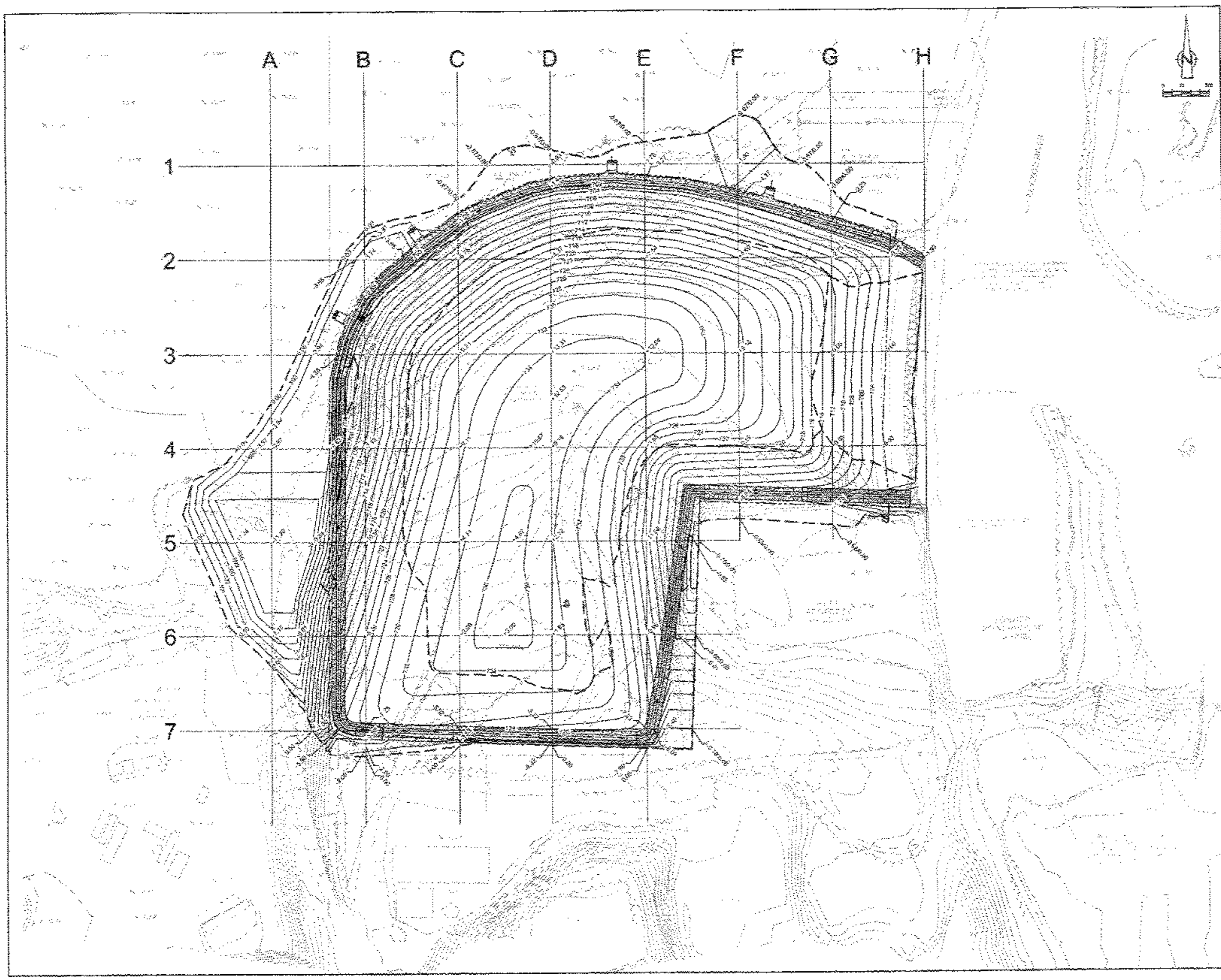
Checked by: REB

INSPECSOL ENGINEERING INC.
MEMBER OF THE CRA FAMILY OF COMPANIES

MOISTURE-DENSITY RELATIONSHIP

Project Name: 12th Street Landfill
Project Number: 56393-07-002
Client: Weyerhaeuser
Location: Plainwell, MI

COMPACTION 056393-07 PROCTORS.GPJ CRA PLYMOUTH.GDT 6/10/10



12th STREET LANDFILL
Otsego Township, Michigan

FINAL DESIGN REPORT

SUBGRADE
CONTOUR PLAN

CONESTOGA-ROVERS & ASSOCIATES

	56399-05	005	C-05A

INSPECSOL ENGINEERING INC.
MEMBER OF THE CHA FAMILY OF COMPANIES

IN-PLACE DENSITY TEST

PROJECT NO.: 056393
PROJECT: 12TH ST LANDFILL
CLIENT:

DATE: 5-24-10
MOISTURE STANDARD: 663 DAILY MOISTURE STANDARD: 660
DENSITY STANDARD: 2502 DAILY DENSITY STANDARD: 2437
GAUGE NO.: 31097

			LAB			FIELD					
TEST NO.	TEST LOCATION	ELEVATION OR LIFT NO.	SAMPLE ID	MAXIMUM DRY UNIT WEIGHT (PCF)	OPTIMUM WATER CONTENT %	IN-PLACE WET UNIT WEIGHT (PCF)	IN-PLACE WATER CONTENT %	IN-PLACE DRY UNIT WEIGHT (PCF)	COMPACTION %	REQUIRED COMPACTION %	NOTES
1	3.D	1	1	56.5	60.0	85.2	63.4	52.1	92.2	90	BALLOON TEST
2	5/6 - CD	2	3	97.5	18.9	109.3	14.0	95.9	98.3		5-27-10
3	5/6 - C	3	3	97.5	18.9	104.6	15.8	90.3	92.6		
4	5/6 BC	4	3	97.5	18.9	102.0	14.9	88.8	91.0		
5	6 - D	1	3	97.5	18.9	104.7	14.8	91.2	93.5		6-4-10
6	5.5 - D	1	3	97.5	18.9	110.3	14.9	96.0	98.4		DS 2410 MS 655
7	5 - D	1	3	97.5	18.9	112.0	15.8	96.7	99.2		
8	5 - E	2	3	97.5	18.9	109.2	16.1	94.0	96.4		
9	5.5 - E	2	3	97.5	18.9	112.0	17.8	95.0	97.5		
10	4 - E	1	3	97.5	18.9	114.9	25.2	91.8	94.1		

NOTES:

PREPARED BY: [signature] CHECKED BY:

IN-PLACE DENSITY TEST

INSPECSOL ENGINEERING INC.
MEMBER OF THE CRA FAMILY OF COMPANIES

PROJECT NO.: 056393
PROJECT: 6TH ST LANDFILL
CLIENT:

DATE: 6-4-10
MOISTURE STANDARD: 663 DAILY MOISTURE STANDARD: 655
DENSITY STANDARD: 2502 DAILY DENSITY STANDARD: 2410
GAUGE NO.: 31097

			LAB			FIELD					
TEST NO.	TEST LOCATION	ELEVATION OR LIFT NO.	SAMPLE ID	MAXIMUM DRY UNIT WEIGHT (PCF)	OPTIMUM WATER CONTENT %	IN-PLACE WET UNIT WEIGHT (PCF)	IN-PLACE WATER CONTENT %	IN-PLACE DRY UNIT WEIGHT (PCF)	COMPACTION %	REQUIRED COMPACTION %	NOTES
11	4-F	1	3	97.5	18.9	108.4	23.2	88.0	90.3	90	
12	3-F	1	3	97.5	18.9	111.0	22.3	90.8	93.1		

NOTES:

PREPARED BY: *[signature]* CHECKED BY:

ATTACHMENT C

ANALYTICAL LABORATORY REPORT

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. 56393-07-0001

12TH STREET LANDFILL

Lot #: A0D290512

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

TESTAMERICA LABORATORIES, INC.

Approved for release.
Denise D. Heckler
Project Manager
5/13/2010 9:00 AM

Denise D. Heckler
Project Manager
denise.heckler@testamericainc.com

May 12, 2010

CASE NARRATIVE

A0D290512

The following report contains the analytical results for one water sample submitted to TestAmerica North Canton by Conestoga-Rovers & Associates, Inc. from the 12th Street Landfill Site, project number 56393-07-0001. The sample was received April 27, 2010, according to documented sample acceptance procedures. Additional sample was received on April 29, 2010.

TestAmerica utilizes USEPA approved methods in all analytical work. The sample presented in this report was analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise D. Heckler, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.0°C.

See TestAmerica's Cooler Receipt Form for additional information.

GC/MS VOLATILES

The matrix spike/matrix spike duplicate(s) for batch(es) 0124450 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

GC/MS SEMIVOLATILES

The analytical results met the requirements of the laboratory's QA/QC program.

PESTICIDES-8081

The analytical results met the requirements of the laboratory's QA/QC program.

POLYCHLORINATED BIPHENYLS-8082

The analytical results met the requirements of the laboratory's QA/QC program.

HERBICIDES-8151

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 0126038. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

METALS

The analytical results met the requirements of the laboratory's QA/QC program.

GENERAL CHEMISTRY

The matrix spike/matrix spike duplicate(s) for batch(es) 0120301 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A0D290512

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
WW-056393-042610-JMD-001 04/26/10 10:00 001				
Flashpoint	>180		deg F	SW846 1010
Total Solids (Residue)	270	10	mg/L	MCAWW 160.3
Corrosivity	8.4		No Units	SW846 9045A

ANALYTICAL METHODS SUMMARY

A0D290512

PARAMETER	ANALYTICAL METHOD
Chlorinated Herbicides by GC	SW846 8151A
Corrosivity	SW846 9045A
Cyanide, Total	SW846 9012A
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Organochlorine Pesticides	SW846 8081A
Pensky-Martens Method for Determining Ignitability	SW846 1010
PCBs by SW-846 8082	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Sulfides, Total 9030B/9034	SW846 9030B/9034
Total Residue (TS)	MCAWW 160.3
Volatile Organics by GC/MS	SW846 8260B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A0D290512

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L0QN1	001	WW-056393-042610-JMD-001	04/26/10	10:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: WW-056393-042610-JMD-001

TCLP GC/MS Volatiles

Lot-Sample #...: A0D290512-001 **Work Order #...:** L0QN11AA **Matrix.....:** WW
Date Sampled...: 04/26/10 10:00 **Date Received..:** 04/27/10
Leach Date.....: 05/03/10 **Prep Date.....:** 05/04/10 **Analysis Date..:** 05/04/10
Leach Batch #..: P012301 **Prep Batch #...:** 0124450
Dilution Factor: 1
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.025	mg/L
2-Butanone (MEK)	ND	0.25	mg/L
Carbon tetrachloride	ND	0.025	mg/L
Chlorobenzene	ND	0.025	mg/L
Chloroform	ND	0.025	mg/L
1,2-Dichloroethane	ND	0.025	mg/L
1,1-Dichloroethylene	ND	0.070	mg/L
Tetrachloroethylene	ND	0.070	mg/L
Trichloroethylene	ND	0.050	mg/L
Vinyl chloride	ND	0.025	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(86 - 125)
1,2-Dichloroethane-d4	109	(80 - 122)
Toluene-d8	112	(90 - 122)
4-Bromofluorobenzene	102	(84 - 125)

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

Conestoga-Rovers & Associates, Inc.

Client Sample ID: WW-056393-042610-JMD-001

TCLP GC/MS Semivolatiles

Lot-Sample #...: A0D290512-001 **Work Order #...:** L0QN11AC **Matrix.....:** WW
Date Sampled...: 04/26/10 10:00 **Date Received..:** 04/27/10
Leach Date.....: 05/03/10 **Prep Date.....:** 05/04/10 **Analysis Date..:** 05/05/10
Leach Batch #..: P012312 **Prep Batch #...:** 0124054
Dilution Factor: 1
Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
o-Cresol	ND	0.0040	mg/L
m-Cresol & p-Cresol	ND	0.040	mg/L
1,4-Dichlorobenzene	ND	0.0040	mg/L
2,4-Dinitrotoluene	ND	0.020	mg/L
Hexachlorobenzene	ND	0.020	mg/L
Hexachlorobutadiene	ND	0.020	mg/L
Hexachloroethane	ND	0.020	mg/L
Nitrobenzene	ND	0.0040	mg/L
Pentachlorophenol	ND	0.040	mg/L
Pyridine	ND	0.020	mg/L
2,4,5-Trichloro-phenol	ND	0.020	mg/L
2,4,6-Trichloro-phenol	ND	0.020	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	42	(27 - 110)
2-Fluorobiphenyl	46	(20 - 110)
Terphenyl-d14	69	(44 - 110)
Phenol-d5	37	(10 - 110)
2-Fluorophenol	46	(10 - 110)
2,4,6-Tribromophenol	43	(28 - 110)

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

Conestoga-Rovers & Associates, Inc.

Client Sample ID: WW-056393-042610-JMD-001

TCLP GC Semivolatiles

Lot-Sample #...: A0D290512-001 **Work Order #...:** L0QN11AD **Matrix.....:** WW
Date Sampled...: 04/26/10 10:00 **Date Received..:** 04/27/10
Leach Date.....: 05/03/10 **Prep Date.....:** 05/04/10 **Analysis Date..:** 05/11/10
Leach Batch #..: P012312 **Prep Batch #...:** 0124050
Dilution Factor: 1
Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chlordane (technical)	ND	0.0050	mg/L
Endrin	ND	0.00050	mg/L
Heptachlor	ND	0.00050	mg/L
Heptachlor epoxide	ND	0.00050	mg/L
Lindane	ND	0.00050	mg/L
Methoxychlor	ND	0.0010	mg/L
Toxaphene	ND	0.020	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	80	(31 - 115)
Tetrachloro-m-xylene	84	(47 - 110)

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

Conestoga-Rovers & Associates, Inc.

Client Sample ID: WW-056393-042610-JMD-001

GC Semivolatiles

Lot-Sample #...: A0D290512-001 **Work Order #...:** L0QN11AU **Matrix.....:** WW
Date Sampled...: 04/26/10 10:00 **Date Received..:** 04/27/10
Prep Date.....: 04/30/10 **Analysis Date..:** 05/03/10
Prep Batch #...: 0120033
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	66	(27 - 130)
Decachlorobiphenyl	53	(10 - 127)

Conestoga-Rovers & Associates, Inc.

Client Sample ID: WW-056393-042610-JMD-001

TCLP GC Semivolatiles

Lot-Sample #...: A0D290512-001 **Work Order #...:** L0QN12AE **Matrix.....:** WW
Date Sampled...: 04/26/10 10:00 **Date Received..:** 04/27/10
Leach Date.....: 05/03/10 **Prep Date.....:** 05/06/10 **Analysis Date..:** 05/07/10
Leach Batch #..: P012312 **Prep Batch #...:** 0126038
Dilution Factor: 1
Method.....: SW846 8151A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	0.50	mg/L
2,4,5-TP (Silvex)	ND	0.10	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4-Dichlorophenylacetic acid	74	(37 - 116)

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

Conestoga-Rovers & Associates, Inc.

Client Sample ID: WW-056393-042610-JMD-001

TCLP Metals

Lot-Sample #...: A0D290512-001 **Matrix.....:** WW
Date Sampled...: 04/26/10 10:00 **Date Received..:** 04/27/10
Leach Date.....: 05/03/10 **Leach Batch #..:** P012302

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0123253						
Arsenic	ND	0.50	mg/L	SW846 6010B	05/03-05/04/10	L0QN11AG
		Dilution Factor: 1				
Barium	ND	10.0	mg/L	SW846 6010B	05/03-05/04/10	L0QN11AH
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/L	SW846 6010B	05/03-05/04/10	L0QN11AJ
		Dilution Factor: 1				
Chromium	ND	0.50	mg/L	SW846 6010B	05/03-05/04/10	L0QN11AK
		Dilution Factor: 1				
Lead	ND	0.50	mg/L	SW846 6010B	05/03-05/04/10	L0QN11AL
		Dilution Factor: 1				
Selenium	ND	0.25	mg/L	SW846 6010B	05/03-05/04/10	L0QN11AM
		Dilution Factor: 1				
Silver	ND	0.50	mg/L	SW846 6010B	05/03-05/04/10	L0QN11AN
		Dilution Factor: 1				
Mercury	ND	0.0020	mg/L	SW846 7470A	05/03-05/04/10	L0QN11AF
		Dilution Factor: 1				

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

Conestoga-Rovers & Associates, Inc.

Client Sample ID: WW-056393-042610-JMD-001

General Chemistry

Lot-Sample #...: A0D290512-001 **Work Order #...:** L0QN1 **Matrix.....:** WW
Date Sampled...: 04/26/10 10:00 **Date Received..:** 04/27/10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	ND	3.0	mg/L	SW846 9030B/9034	04/30/10	0120302
		Dilution Factor: 1				
Corrosivity	**8.4**		**No Units**	**SW846 9045A**	**04/27/10**	**0119431**
		Dilution Factor: 1				
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	05/10/10	0130227
		Dilution Factor: 1				
Flashpoint	**>180**		**deg F**	**SW846 1010**	**05/10/10**	**0130398**
		Dilution Factor: 1				
Total Solids (Residue)	**270**	**10**	**mg/L**	**MCAWW 160.3**	**05/03-05/05/10**	**0123092**
		Dilution Factor: 1				

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

QUALITY CONTROL SECTION

METHOD BLANK REPORT

TCLP GC/MS Volatiles

Client Lot #...: A0D290512 **Work Order #...:** L0WJX1AA **Matrix.....:** SOLID
MB Lot-Sample #: A0E030000-068
Leach Date.....: 05/03/10 **Prep Date.....:** 05/04/10 **Analysis Date..:** 05/04/10
Leach Batch #..: P012301 **Prep Batch #...:** 0124450
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	0.025	mg/L	SW846 8260B
2-Butanone (MEK)	ND	0.25	mg/L	SW846 8260B
Carbon tetrachloride	ND	0.025	mg/L	SW846 8260B
Chlorobenzene	ND	0.025	mg/L	SW846 8260B
Chloroform	ND	0.025	mg/L	SW846 8260B
1,2-Dichloroethane	ND	0.025	mg/L	SW846 8260B
1,1-Dichloroethylene	ND	0.070	mg/L	SW846 8260B
Tetrachloroethylene	ND	0.070	mg/L	SW846 8260B
Trichloroethylene	ND	0.050	mg/L	SW846 8260B
Vinyl chloride	ND	0.025	mg/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(86 - 125)
1,2-Dichloroethane-d4	113	(80 - 122)
Toluene-d8	115	(90 - 122)
4-Bromofluorobenzene	105	(84 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A0D290512 **Work Order #...:** L01FW1AA **Matrix.....:** SOLID
LCS Lot-Sample#: A0E040000-450
Prep Date.....: 05/04/10 **Analysis Date..:** 05/04/10
Prep Batch #...: 0124450
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	**1.0**	**0.94**	**mg/L**	**94**	**SW846 8260B**
2-Butanone (MEK)	2.0	2.2	mg/L	110	SW846 8260B
Carbon tetrachloride	1.0	1.0	mg/L	100	SW846 8260B
Chlorobenzene	**1.0**	**0.97**	**mg/L**	**97**	**SW846 8260B**
Chloroform	1.0	0.95	mg/L	95	SW846 8260B
1,2-Dichloroethane	1.0	1.1	mg/L	108	SW846 8260B
1,1-Dichloroethylene	**1.0**	**1.1**	**mg/L**	**113**	**SW846 8260B**
Tetrachloroethylene	1.0	0.86	mg/L	86	SW846 8260B
Trichloroethylene	**1.0**	**0.83**	**mg/L**	**83**	**SW846 8260B**
Vinyl chloride	1.0	0.97	mg/L	97	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(86 - 124)
1,2-Dichloroethane-d4	105	(80 - 122)
Toluene-d8	103	(90 - 122)
4-Bromofluorobenzene	102	(84 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D290512 **Work Order #...:** L01FW1AA **Matrix.....:** SOLID
LCS Lot-Sample#: A0E040000-450
Prep Date.....: 05/04/10 **Analysis Date..:** 05/04/10
Prep Batch #...: 0124450
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**94**	**(76 - 118)**	**SW846 8260B**
2-Butanone (MEK)	110	(40 - 110)	SW846 8260B
Carbon tetrachloride	100	(71 - 124)	SW846 8260B
Chlorobenzene	**97**	**(76 - 113)**	**SW846 8260B**
Chloroform	95	(82 - 117)	SW846 8260B
1,2-Dichloroethane	108	(78 - 122)	SW846 8260B
1,1-Dichloroethylene	**113**	**(67 - 128)**	**SW846 8260B**
Tetrachloroethylene	86	(64 - 121)	SW846 8260B
Trichloroethylene	**83**	**(76 - 119)**	**SW846 8260B**
Vinyl chloride	97	(47 - 123)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(86 - 124)
1,2-Dichloroethane-d4	105	(80 - 122)
Toluene-d8	103	(90 - 122)
4-Bromofluorobenzene	102	(84 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

TCLP GC/MS Volatiles

Client Lot #...: A0D290512 **Work Order #...:** L0PT31AX-MS **Matrix.....:** SOLID
MS Lot-Sample #: A0D290449-001 L0PT31A0-MSD
Date Sampled...: 04/28/10 15:15 **Date Received..:** 04/29/10
Leach Date.....: 05/03/10 **Prep Date.....:** 05/04/10 **Analysis Date..:** 05/04/10
Leach Batch #..: P012301 **Prep Batch #...:** 0124450
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**1.0**	**1.0**	**mg/L**	**102**		**SW846 8260B**
	ND	**1.0**	**1.0**	**mg/L**	**103**	**0.43**	**SW846 8260B**
2-Butanone (MEK)	ND	2.0	2.2	mg/L	110		SW846 8260B
	ND	2.0	2.2	mg/L	110	0.71	SW846 8260B
Carbon tetrachloride	ND	1.0	1.0	mg/L	101		SW846 8260B
	ND	1.0	1.1	mg/L	109	7.8	SW846 8260B
Chlorobenzene	**ND**	**1.0**	**1.0**	**mg/L**	**104**		**SW846 8260B**
	ND	**1.0**	**1.1**	**mg/L**	**106**	**1.5**	**SW846 8260B**
Chloroform	ND	1.0	1.0	mg/L	100		SW846 8260B
	ND	1.0	1.0	mg/L	100	0.79	SW846 8260B
1,2-Dichloroethane	ND	1.0	1.1	mg/L	114		SW846 8260B
	ND	1.0	1.1	mg/L	114	0.43	SW846 8260B
1,1-Dichloroethylene	**ND**	**1.0**	**1.3**	**mg/L**	**133 a**		**SW846 8260B**
	ND	**1.0**	**1.4**	**mg/L**	**137 a**	**2.9**	**SW846 8260B**
Tetrachloroethylene	ND	1.0	1.0	mg/L	102		SW846 8260B
	ND	1.0	1.0	mg/L	103	1.5	SW846 8260B
Trichloroethylene	**0.068**	**1.0**	**0.98**	**mg/L**	**91**		**SW846 8260B**
	0.068	**1.0**	**1.0**	**mg/L**	**93**	**1.3**	**SW846 8260B**
Vinyl chloride	ND	1.0	1.2	mg/L	118		SW846 8260B
	ND	1.0	1.2	mg/L	118	0.01	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(86 - 125)
	100	(86 - 125)
1,2-Dichloroethane-d4	117	(80 - 122)
	107	(80 - 122)
Toluene-d8	112	(90 - 122)
	112	(90 - 122)
4-Bromofluorobenzene	107	(84 - 125)
	108	(84 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP GC/MS Volatiles

Client Lot #...: A0D290512 **Work Order #...:** L0PT31AX-MS **Matrix.....:** SOLID
MS Lot-Sample #: A0D290449-001 L0PT31A0-MSD
Date Sampled...: 04/28/10 15:15 **Date Received..:** 04/29/10
Leach Date.....: 05/03/10 **Prep Date.....:** 05/04/10 **Analysis Date..:** 05/04/10
Leach Batch #..: P012301 **Prep Batch #...:** 0124450
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**102**	**(76 - 117)**			**SW846 8260B**
	103	**(76 - 117)**	**0.43**	**(0-30)**	**SW846 8260B**
2-Butanone (MEK)	110	(37 - 110)			SW846 8260B
	110	(37 - 110)	0.71	(0-30)	SW846 8260B
Carbon tetrachloride	101	(72 - 124)			SW846 8260B
	109	(72 - 124)	7.8	(0-30)	SW846 8260B
Chlorobenzene	**104**	**(72 - 114)**			**SW846 8260B**
	106	**(72 - 114)**	**1.5**	**(0-30)**	**SW846 8260B**
Chloroform	100	(82 - 117)			SW846 8260B
	100	(82 - 117)	0.79	(0-30)	SW846 8260B
1,2-Dichloroethane	114	(80 - 120)			SW846 8260B
	114	(80 - 120)	0.43	(0-30)	SW846 8260B
1,1-Dichloroethylene	**133 a**	**(67 - 129)**			**SW846 8260B**
	137 a	**(67 - 129)**	**2.9**	**(0-30)**	**SW846 8260B**
Tetrachloroethylene	102	(60 - 119)			SW846 8260B
	103	(60 - 119)	1.5	(0-30)	SW846 8260B
Trichloroethylene	**91**	**(72 - 121)**			**SW846 8260B**
	93	**(72 - 121)**	**1.3**	**(0-30)**	**SW846 8260B**
Vinyl chloride	118	(54 - 118)			SW846 8260B
	118	(54 - 118)	0.01	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(86 - 125)
	100	(86 - 125)
1,2-Dichloroethane-d4	117	(80 - 122)
	107	(80 - 122)
Toluene-d8	112	(90 - 122)
	112	(90 - 122)
4-Bromofluorobenzene	107	(84 - 125)
	108	(84 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

METHOD BLANK REPORT

TCLP GC/MS Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L0XML1AA **Matrix.....:** WATER
MB Lot-Sample #: A0E040000-054
Leach Date.....: 05/03/10 **Prep Date.....:** 05/04/10 **Analysis Date..:** 05/05/10
Leach Batch #..: P012312 **Prep Batch #...:** 0124054
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
o-Cresol	ND	0.0040	mg/L	SW846 8270C
m-Cresol & p-Cresol	ND	0.040	mg/L	SW846 8270C
1,4-Dichlorobenzene	ND	0.0040	mg/L	SW846 8270C
2,4-Dinitrotoluene	ND	0.020	mg/L	SW846 8270C
Hexachlorobenzene	ND	0.020	mg/L	SW846 8270C
Hexachlorobutadiene	ND	0.020	mg/L	SW846 8270C
Hexachloroethane	ND	0.020	mg/L	SW846 8270C
Nitrobenzene	ND	0.0040	mg/L	SW846 8270C
Pentachlorophenol	ND	0.040	mg/L	SW846 8270C
Pyridine	ND	0.020	mg/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	0.020	mg/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	0.020	mg/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	54	(27 - 110)
2-Fluorobiphenyl	61	(20 - 110)
Terphenyl-d14	78	(44 - 110)
Phenol-d5	43	(10 - 110)
2-Fluorophenol	59	(10 - 110)
2,4,6-Tribromophenol	36	(28 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L0XML1AC **Matrix.....:** WATER
LCS Lot-Sample#: A0E040000-054
Prep Date.....: 05/04/10 **Analysis Date..:** 05/05/10
Prep Batch #...: 0124054
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
o-Cresol	**0.080**	**0.062**	**mg/L**	**78**	**SW846 8270C**
m-Cresol & p-Cresol	**0.16**	**0.12**	**mg/L**	**72**	**SW846 8270C**
1,4-Dichlorobenzene	**0.080**	**0.055**	**mg/L**	**69**	**SW846 8270C**
2,4-Dinitrotoluene	**0.080**	**0.063**	**mg/L**	**79**	**SW846 8270C**
Hexachlorobenzene	**0.080**	**0.059**	**mg/L**	**73**	**SW846 8270C**
Hexachlorobutadiene	**0.080**	**0.051**	**mg/L**	**64**	**SW846 8270C**
Hexachloroethane	**0.080**	**0.049**	**mg/L**	**61**	**SW846 8270C**
Nitrobenzene	**0.080**	**0.058**	**mg/L**	**73**	**SW846 8270C**
Pentachlorophenol	**0.080**	**0.037**	**mg/L**	**47**	**SW846 8270C**
Pyridine	**0.080**	**0.045**	**mg/L**	**56**	**SW846 8270C**
2,4,5-Trichloro-phenol	**0.080**	**0.058**	**mg/L**	**72**	**SW846 8270C**
2,4,6-Trichloro-phenol	**0.080**	**0.055**	**mg/L**	**69**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	66	(27 - 110)
2-Fluorobiphenyl	70	(20 - 110)
Terphenyl-d14	79	(44 - 110)
Phenol-d5	57	(10 - 110)
2-Fluorophenol	68	(10 - 110)
2,4,6-Tribromophenol	70	(28 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L0XML1AC **Matrix.....:** WATER
LCS Lot-Sample#: A0E040000-054
Prep Date.....: 05/04/10 **Analysis Date..:** 05/05/10
Prep Batch #...: 0124054
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
o-Cresol	**78**	**(23 - 110)**	**SW846 8270C**
m-Cresol & p-Cresol	**72**	**(28 - 110)**	**SW846 8270C**
1,4-Dichlorobenzene	**69**	**(13 - 110)**	**SW846 8270C**
2,4-Dinitrotoluene	**79**	**(45 - 119)**	**SW846 8270C**
Hexachlorobenzene	**73**	**(46 - 112)**	**SW846 8270C**
Hexachlorobutadiene	**64**	**(10 - 110)**	**SW846 8270C**
Hexachloroethane	**61**	**(10 - 110)**	**SW846 8270C**
Nitrobenzene	**73**	**(29 - 118)**	**SW846 8270C**
Pentachlorophenol	**47**	**(10 - 116)**	**SW846 8270C**
Pyridine	**56**	**(15 - 110)**	**SW846 8270C**
2,4,5-Trichloro-phenol	**72**	**(36 - 110)**	**SW846 8270C**
2,4,6-Trichloro-phenol	**69**	**(32 - 110)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	66	(27 - 110)
2-Fluorobiphenyl	70	(20 - 110)
Terphenyl-d14	79	(44 - 110)
Phenol-d5	57	(10 - 110)
2-Fluorophenol	68	(10 - 110)
2,4,6-Tribromophenol	70	(28 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Lot-Sample #...: A0D290512 **Work Order #...:** L0PT31AW **Matrix.....:** SOLID
MS Lot-Sample #: A0D290449-001
Date Sampled...: 04/28/10 15:15 **Date Received..:** 04/29/10
Prep Date.....: 05/04/10 **Analysis Date..:** 05/05/10
Prep Batch #...: 0124053
Dilution Factor: 1 **Percnt Moisture:** 17

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	METHOD
o-Cresol	**0.030**	**0.080**	**0.095**	**mg/L**	**81**	**SW846 8270C**
2-Methylphenol	**0.030**	**0.080**	**0.095**	**mg/L**	**81**	**SW846 8270C**
m-Cresol & p-Cresol	**0.040**	**0.16**	**0.18**	**mg/L**	**85**	**SW846 8270C**
1,4-Dichlorobenzene	**ND**	**0.080**	**0.054**	**mg/L**	**68**	**SW846 8270C**
2,4-Dinitrotoluene	**ND**	**0.080**	**0.057**	**mg/L**	**72**	**SW846 8270C**
Hexachlorobenzene	**ND**	**0.080**	**0.056**	**mg/L**	**69**	**SW846 8270C**
Hexachlorobutadiene	**ND**	**0.080**	**0.045**	**mg/L**	**56**	**SW846 8270C**
Hexachloroethane	**ND**	**0.080**	**0.074**	**mg/L**	**92**	**SW846 8270C**
Nitrobenzene	**ND**	**0.080**	**0.048**	**mg/L**	**61**	**SW846 8270C**
Pentachlorophenol	**ND**	**0.080**	**0.063**	**mg/L**	**78**	**SW846 8270C**
Pyridine	**ND**	**0.080**	**0.048**	**mg/L**	**60**	**SW846 8270C**
2,4,5-Trichloro-phenol	**ND**	**0.080**	**0.060**	**mg/L**	**74**	**SW846 8270C**
2,4,6-Trichloro-phenol	**ND**	**0.080**	**0.061**	**mg/L**	**76**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	52	(29 - 111)
2-Fluorobiphenyl	65	(22 - 110)
Terphenyl-d14	78	(40 - 119)
Phenol-d5	58	(10 - 110)
2-Fluorophenol	69	(10 - 110)
2,4,6-Tribromophenol	79	(17 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Lot-Sample #...: A0D290512 **Work Order #...:** L0PT31AW **Matrix.....:** SOLID
MS Lot-Sample #: A0D290449-001
Date Sampled...: 04/28/10 15:15 **Date Received..:** 04/29/10
Prep Date.....: 05/04/10 **Analysis Date..:** 05/05/10
Prep Batch #...: 0124053
Dilution Factor: 1 **Percnt Moisture:** 17

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
o-Cresol	**81**	**(33 - 115)**	**SW846 8270C**
2-Methylphenol	**81**	**(33 - 115)**	**SW846 8270C**
m-Cresol & p-Cresol	**85**	**(46 - 109)**	**SW846 8270C**
1,4-Dichlorobenzene	**68**	**(18 - 110)**	**SW846 8270C**
2,4-Dinitrotoluene	**72**	**(31 - 131)**	**SW846 8270C**
Hexachlorobenzene	**69**	**(36 - 132)**	**SW846 8270C**
Hexachlorobutadiene	**56**	**(18 - 116)**	**SW846 8270C**
Hexachloroethane	**92**	**(18 - 110)**	**SW846 8270C**
Nitrobenzene	**61**	**(19 - 211)**	**SW846 8270C**
Pentachlorophenol	**78**	**(10 - 140)**	**SW846 8270C**
Pyridine	**60**	**(10 - 148)**	**SW846 8270C**
2,4,5-Trichloro-phenol	**74**	**(24 - 143)**	**SW846 8270C**
2,4,6-Trichloro-phenol	**76**	**(36 - 135)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	52	(29 - 111)
2-Fluorobiphenyl	65	(22 - 110)
Terphenyl-d14	78	(40 - 119)
Phenol-d5	58	(10 - 110)
2-Fluorophenol	69	(10 - 110)
2,4,6-Tribromophenol	79	(17 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

TCLP GC Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L0XMF1AA **Matrix.....:** WATER
MB Lot-Sample #: A0E040000-050
Leach Date.....: 05/03/10 **Prep Date.....:** 05/04/10 **Analysis Date..:** 05/10/10
Leach Batch #..: P012312 **Prep Batch #...:** 0124050
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chlordane (technical)	ND	0.0050	mg/L	SW846 8081A
Endrin	ND	0.00050	mg/L	SW846 8081A
Heptachlor	ND	0.00050	mg/L	SW846 8081A
Heptachlor epoxide	ND	0.00050	mg/L	SW846 8081A
Lindane	ND	0.00050	mg/L	SW846 8081A
Methoxychlor	ND	0.0010	mg/L	SW846 8081A
Toxaphene	ND	0.020	mg/L	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	93	(31 - 115)
Tetrachloro-m-xylene	85	(47 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L0XMF1AC **Matrix.....:** WATER
LCS Lot-Sample#: A0E040000-050
Prep Date.....: 05/04/10 **Analysis Date..:** 05/10/10
Prep Batch #...: 0124050
Dilution Factor: 5

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Endrin	**0.0020**	**0.0020**	**mg/L**	**98**	**SW846 8081A**
Heptachlor	**0.0020**	**0.0016**	**mg/L**	**82**	**SW846 8081A**
Heptachlor epoxide	**0.0020**	**0.0016**	**mg/L**	**81**	**SW846 8081A**
Lindane	**0.0020**	**0.0016**	**mg/L**	**81**	**SW846 8081A**
Methoxychlor	**0.0040**	**0.0036**	**mg/L**	**90**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	96	(31 - 115)
Tetrachloro-m-xylene	76	(47 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L0XMF1AC **Matrix.....:** WATER
LCS Lot-Sample#: A0E040000-050
Prep Date.....: 05/04/10 **Analysis Date..:** 05/10/10
Prep Batch #...: 0124050
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Endrin	**98**	**(50 - 110)**	**SW846 8081A**
Heptachlor	**82**	**(57 - 110)**	**SW846 8081A**
Heptachlor epoxide	**81**	**(56 - 110)**	**SW846 8081A**
Lindane	**81**	**(56 - 110)**	**SW846 8081A**
Methoxychlor	**90**	**(41 - 126)**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	96	(31 - 115)
Tetrachloro-m-xylene	76	(47 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Lot-Sample #...: A0D290512 **Work Order #...:** L0QN11A0 **Matrix.....:** WW
MS Lot-Sample #: A0D290512-001
Date Sampled...: 04/26/10 10:00 **Date Received..:** 04/27/10
Prep Date.....: 05/04/10 **Analysis Date..:** 05/11/10
Prep Batch #...: 0124050
Dilution Factor: 5

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Endrin	**ND**	**0.002**	**0.0019**	**mg/L**	**93**	**SW846 8081A**
Heptachlor	**ND**	**0.002**	**0.0017**	**mg/L**	**83**	**SW846 8081A**
Heptachlor epoxide	**ND**	**0.002**	**0.0017**	**mg/L**	**84**	**SW846 8081A**
Lindane	**ND**	**0.002**	**0.0017**	**mg/L**	**87**	**SW846 8081A**
Methoxychlor	**ND**	**0.004**	**0.0033**	**mg/L**	**81**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	84	(31 - 115)
Tetrachloro-m-xylene	78	(47 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Lot-Sample #...: A0D290512 **Work Order #...:** L0QN11A0 **Matrix.....:** WW
MS Lot-Sample #: A0D290512-001
Date Sampled...: 04/26/10 10:00 **Date Received..:** 04/27/10
Prep Date.....: 05/04/10 **Analysis Date..:** 05/11/10
Prep Batch #...: 0124050
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Endrin	**93**	**(50 - 150)**	**SW846 8081A**
Heptachlor	**83**	**(50 - 150)**	**SW846 8081A**
Heptachlor epoxide	**84**	**(50 - 150)**	**SW846 8081A**
Lindane	**87**	**(50 - 150)**	**SW846 8081A**
Methoxychlor	**81**	**(50 - 150)**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	84	(31 - 115)
Tetrachloro-m-xylene	78	(47 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L0REG1AA **Matrix.....:** WATER
MB Lot-Sample #: A0D300000-033

Prep Date.....: 04/30/10
Analysis Date..: 05/03/10 **Prep Batch #...:** 0120033
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	1.0	ug/L	SW846 8082
Aroclor 1221	ND	1.0	ug/L	SW846 8082
Aroclor 1232	ND	1.0	ug/L	SW846 8082
Aroclor 1242	ND	1.0	ug/L	SW846 8082
Aroclor 1248	ND	1.0	ug/L	SW846 8082
Aroclor 1254	ND	1.0	ug/L	SW846 8082
Aroclor 1260	ND	1.0	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	76	(27 - 130)
Decachlorobiphenyl	66	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L0REG1AC **Matrix.....:** WATER
LCS Lot-Sample#: A0D300000-033
Prep Date.....: 04/30/10 **Analysis Date..:** 05/03/10
Prep Batch #...: 0120033
Dilution Factor: 2

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aroclor 1016	**10**	**8.6**	**ug/L**	**86**	**SW846 8082**
Aroclor 1260	**10**	**7.5**	**ug/L**	**75**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	80	(27 - 130)
Decachlorobiphenyl	33	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L0REG1AC **Matrix.....:** WATER
LCS Lot-Sample#: A0D300000-033
Prep Date.....: 04/30/10 **Analysis Date..:** 05/03/10
Prep Batch #...: 0120033
Dilution Factor: 2

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	**86**	**(44 - 119)**	**SW846 8082**
Aroclor 1260	**75**	**(41 - 118)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	80	(27 - 130)
Decachlorobiphenyl	33	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L0Q051FP-MS **Matrix.....:** WATER
MS Lot-Sample #: A0D290554-008 L0Q051FQ-MSD
Date Sampled...: 04/28/10 15:30 **Date Received..:** 04/29/10
Prep Date.....: 04/30/10 **Analysis Date..:** 05/03/10
Prep Batch #...: 0120033
Dilution Factor: 2

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Aroclor 1016	**ND**	**19**	**10**	**ug/L**	**53**		**SW846 8082**
	ND	**19**	**11**	**ug/L**	**60**	**13**	**SW846 8082**
Aroclor 1260	**ND**	**19**	**3.9**	**ug/L**	**21**		**SW846 8082**
	ND	**19**	**4.8**	**ug/L**	**25**	**19**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	55	(27 - 130)
	64	(27 - 130)
Decachlorobiphenyl	19	(10 - 127)
	23	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L0Q051FP-MS **Matrix.....:** WATER
MS Lot-Sample #: A0D290554-008 L0Q051FQ-MSD
Date Sampled...: 04/28/10 15:30 **Date Received..:** 04/29/10
Prep Date.....: 04/30/10 **Analysis Date..:** 05/03/10
Prep Batch #...: 0120033
Dilution Factor: 2

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**53**	**(10 - 166)**			**SW846 8082**
	60	**(10 - 166)**	**13**	**(0-30)**	**SW846 8082**
Aroclor 1260	**21**	**(21 - 140)**			**SW846 8082**
	25	**(21 - 140)**	**19**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	55	(27 - 130)
	64	(27 - 130)
Decachlorobiphenyl	19	(10 - 127)
	23	(10 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

TCLP GC Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L03V51AA **Matrix.....:** WATER
MB Lot-Sample #: A0E060000-038
Leach Date.....: 05/03/10 **Prep Date.....:** 05/06/10 **Analysis Date..:** 05/07/10
Leach Batch #..: P012312 **Prep Batch #...:** 0126038
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-D	ND	0.50	mg/L	SW846 8151A
2,4,5-TP (Silvex)	ND	0.10	mg/L	SW846 8151A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4-Dichlorophenylacetic acid	83	(37 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L03V51AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0E060000-038 L03V51AD-LCSD
Prep Date.....: 05/06/10 **Analysis Date..:** 05/07/10
Prep Batch #...: 0126038
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
2,4-D	**0.020**	**0.016**	**mg/L**	**81**		**SW846 8151A**
	0.020	**0.016**	**mg/L**	**81**	**0.14**	**SW846 8151A**
2,4,5-TP (Silvex)	**0.0050**	**0.0041**	**mg/L**	**82**		**SW846 8151A**
	0.0050	**0.0042**	**mg/L**	**83**	**2.1**	**SW846 8151A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4-Dichlorophenylacetic **acid**	79	(37 - 116)
	79	(37 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A0D290512 **Work Order #...:** L03V51AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0E060000-038 L03V51AD-LCSD
Prep Date.....: 05/06/10 **Analysis Date..:** 05/07/10
Prep Batch #...: 0126038
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
2,4-D	**81**	**(35 - 136)**			**SW846 8151A**
	81	**(35 - 136)**	**0.14**	**(0-50)**	**SW846 8151A**
2,4,5-TP (Silvex)	**82**	**(46 - 112)**			**SW846 8151A**
	83	**(46 - 112)**	**2.1**	**(0-63)**	**SW846 8151A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4-Dichlorophenylacetic acid	79	(37 - 116)
	79	(37 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

TCLP Metals

Client Lot #...: A0D290512 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A0E030000-072 **Prep Batch #...:** 0123253						
Leach Date.....: 05/03/10 **Leach Batch #..:** P012302						
Arsenic	ND	0.50	mg/L	SW846 6010B	05/03-05/04/10	L0WJ61AA
		Dilution Factor: 1				
Barium	ND	10.0	mg/L	SW846 6010B	05/03-05/04/10	L0WJ61AC
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/L	SW846 6010B	05/03-05/04/10	L0WJ61AD
		Dilution Factor: 1				
Chromium	ND	0.50	mg/L	SW846 6010B	05/03-05/04/10	L0WJ61AE
		Dilution Factor: 1				
Lead	ND	0.50	mg/L	SW846 6010B	05/03-05/04/10	L0WJ61AF
		Dilution Factor: 1				
Selenium	ND	0.25	mg/L	SW846 6010B	05/03-05/04/10	L0WJ61AG
		Dilution Factor: 1				
Silver	ND	0.50	mg/L	SW846 6010B	05/03-05/04/10	L0WJ61AH
		Dilution Factor: 1				
Mercury	ND	0.0020	mg/L	SW846 7470A	05/03-05/04/10	L0WJ61AJ
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TCLP Metals

Client Lot #...: A0D290512 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A0E030000-253 **Prep Batch #...:** 0123253						
Arsenic	ND	0.50	mg/L	SW846 6010B	05/03-05/04/10	L0WXK1AA
		Dilution Factor: 1				
Barium	ND	10.0	mg/L	SW846 6010B	05/03-05/04/10	L0WXK1AC
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/L	SW846 6010B	05/03-05/04/10	L0WXK1AD
		Dilution Factor: 1				
Chromium	ND	0.50	mg/L	SW846 6010B	05/03-05/04/10	L0WXK1AE
		Dilution Factor: 1				
Lead	ND	0.50	mg/L	SW846 6010B	05/03-05/04/10	L0WXK1AF
		Dilution Factor: 1				
Selenium	ND	0.25	mg/L	SW846 6010B	05/03-05/04/10	L0WXK1AG
		Dilution Factor: 1				
Silver	ND	0.50	mg/L	SW846 6010B	05/03-05/04/10	L0WXK1AH
		Dilution Factor: 1				
Mercury	ND	0.0020	mg/L	SW846 7470A	05/03-05/04/10	L0WXK1AJ
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TCLP Metals

Client Lot #...: A0D290512 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A0E030000-253 **Prep Batch #...:** 0123253							
Arsenic	2.0	2.1	mg/L	107	SW846 6010B	05/03-05/04/10	L0WXK1AK
			Dilution Factor: 1				
Barium	2.0	2.1	mg/L	103	SW846 6010B	05/03-05/04/10	L0WXK1AL
			Dilution Factor: 1				
Cadmium	0.050	0.053	mg/L	106	SW846 6010B	05/03-05/04/10	L0WXK1AM
			Dilution Factor: 1				
Chromium	0.20	0.21	mg/L	105	SW846 6010B	05/03-05/04/10	L0WXK1AN
			Dilution Factor: 1				
Lead	0.50	0.53	mg/L	105	SW846 6010B	05/03-05/04/10	L0WXK1AP
			Dilution Factor: 1				
Selenium	2.0	2.1	mg/L	107	SW846 6010B	05/03-05/04/10	L0WXK1AQ
			Dilution Factor: 1				
Silver	0.050	0.053	mg/L	106	SW846 6010B	05/03-05/04/10	L0WXK1AR
			Dilution Factor: 1				
Mercury	0.0050	0.0054	mg/L	108	SW846 7470A	05/03-05/04/10	L0WXK1AT
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: A0D290512 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A0E030000-253 **Prep Batch #...:** 0123253					
Arsenic	107	(50 - 150)	SW846 6010B Dilution Factor: 1	05/03-05/04/10	L0WXK1AK
Barium	103	(50 - 150)	SW846 6010B Dilution Factor: 1	05/03-05/04/10	L0WXK1AL
Cadmium	106	(50 - 150)	SW846 6010B Dilution Factor: 1	05/03-05/04/10	L0WXK1AM
Chromium	105	(50 - 150)	SW846 6010B Dilution Factor: 1	05/03-05/04/10	L0WXK1AN
Lead	105	(50 - 150)	SW846 6010B Dilution Factor: 1	05/03-05/04/10	L0WXK1AP
Selenium	107	(50 - 150)	SW846 6010B Dilution Factor: 1	05/03-05/04/10	L0WXK1AQ
Silver	106	(50 - 150)	SW846 6010B Dilution Factor: 1	05/03-05/04/10	L0WXK1AR
Mercury	108	(50 - 150)	SW846 7470A Dilution Factor: 1	05/03-05/04/10	L0WXK1AT

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TCLP Metals

Client Lot #...: A0D290512 **Matrix.....:** WATER
Date Sampled...: 04/30/10 09:15 **Date Received..:** 04/30/10

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A0D300588-001 **Prep Batch #...:** 0123253									
Leach Date.....: 05/03/10 **Leach Batch #..:** P012302									
Arsenic									
	ND	5.0	5.1	mg/L	103		SW846 6010B	05/03-05/04/10	L0VAA1AN
	ND	5.0	5.1	mg/L	101	1.1	SW846 6010B	05/03-05/04/10	L0VAA1AP
			Dilution Factor: 5						
Barium									
	ND	50.0	49.7	mg/L	99		SW846 6010B	05/03-05/04/10	L0VAA1AQ
	ND	50.0	48.8	mg/L	97	1.8	SW846 6010B	05/03-05/04/10	L0VAA1AR
			Dilution Factor: 5						
Cadmium									
	ND	1.0	1.0	mg/L	103		SW846 6010B	05/03-05/04/10	L0VAA1AT
	ND	1.0	1.0	mg/L	102	1.5	SW846 6010B	05/03-05/04/10	L0VAA1AU
			Dilution Factor: 5						
Chromium									
	ND	5.0	5.1	mg/L	102		SW846 6010B	05/03-05/04/10	L0VAA1AV
	ND	5.0	5.1	mg/L	101	1.3	SW846 6010B	05/03-05/04/10	L0VAA1AW
			Dilution Factor: 5						
Lead									
	ND	5.0	5.2	mg/L	104		SW846 6010B	05/03-05/04/10	L0VAA1AX
	ND	5.0	5.1	mg/L	102	1.5	SW846 6010B	05/03-05/04/10	L0VAA1A0
			Dilution Factor: 5						
Selenium									
	ND	1.0	0.83	mg/L	83		SW846 6010B	05/03-05/04/10	L0VAA1A1
	ND	1.0	0.80	mg/L	80	4.3	SW846 6010B	05/03-05/04/10	L0VAA1A2
			Dilution Factor: 5						
Silver									
	ND	1.0	1.0	mg/L	101		SW846 6010B	05/03-05/04/10	L0VAA1A3
	ND	1.0	1.0	mg/L	100	1.5	SW846 6010B	05/03-05/04/10	L0VAA1A4
			Dilution Factor: 5						
Mercury									
	ND	0.0050	0.0053	mg/L	105		SW846 7470A	05/03-05/04/10	L0VAA1A5
	ND	0.0050	0.0053	mg/L	106	0.86	SW846 7470A	05/03-05/04/10	L0VAA1A6
			Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: A0D290512 **Matrix.....:** WATER
Date Sampled...: 04/30/10 09:15 **Date Received..:** 04/30/10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A0D300588-001 **Prep Batch #...:** 0123253							
Leach Date.....: 05/03/10 **Leach Batch #..:** P012302							
Arsenic	103	(50 - 150)			SW846 6010B	05/03-05/04/10	L0VAA1AN
	101	(50 - 150)	1.1	(0-20)	SW846 6010B	05/03-05/04/10	L0VAA1AP
		Dilution Factor: 5					
Barium	99	(50 - 150)			SW846 6010B	05/03-05/04/10	L0VAA1AQ
	97	(50 - 150)	1.8	(0-20)	SW846 6010B	05/03-05/04/10	L0VAA1AR
		Dilution Factor: 5					
Cadmium	103	(50 - 150)			SW846 6010B	05/03-05/04/10	L0VAA1AT
	102	(50 - 150)	1.5	(0-20)	SW846 6010B	05/03-05/04/10	L0VAA1AU
		Dilution Factor: 5					
Chromium	102	(50 - 150)			SW846 6010B	05/03-05/04/10	L0VAA1AV
	101	(50 - 150)	1.3	(0-20)	SW846 6010B	05/03-05/04/10	L0VAA1AW
		Dilution Factor: 5					
Lead	104	(50 - 150)			SW846 6010B	05/03-05/04/10	L0VAA1AX
	102	(50 - 150)	1.5	(0-20)	SW846 6010B	05/03-05/04/10	L0VAA1A0
		Dilution Factor: 5					
Selenium	83	(50 - 150)			SW846 6010B	05/03-05/04/10	L0VAA1A1
	80	(50 - 150)	4.3	(0-20)	SW846 6010B	05/03-05/04/10	L0VAA1A2
		Dilution Factor: 5					
Silver	101	(50 - 150)			SW846 6010B	05/03-05/04/10	L0VAA1A3
	100	(50 - 150)	1.5	(0-20)	SW846 6010B	05/03-05/04/10	L0VAA1A4
		Dilution Factor: 5					
Mercury	105	(50 - 150)			SW846 7470A	05/03-05/04/10	L0VAA1A5
	106	(50 - 150)	0.86	(0-20)	SW846 7470A	05/03-05/04/10	L0VAA1A6
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A0D290512 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide		Work Order #: L0TQH1AA		MB Lot-Sample #:	A0D300000-302	
	ND	3.0	mg/L	SW846 9030B/9034	04/30/10	0120302
		Dilution Factor: 1				
Cyanide, Total		Work Order #: L09VH1AA		MB Lot-Sample #:	A0E100000-227	
	ND	0.010	mg/L	SW846 9012A	05/10/10	0130227
		Dilution Factor: 1				
Total Solids (Residue)		Work Order #: L0WL21AA		MB Lot-Sample #:	A0E030000-092	
	ND	10	mg/L	MCAWW 160.3	05/03-05/05/10	0123092
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A0D290512 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide			Work Order #: L0TQH1AC		LCS Lot-Sample#: A0D300000-302		
	8.8	9.1	mg/L	103	SW846 9030B/9034	04/30/10	0120302
			Dilution Factor: 1				
Corrosivity			Work Order #: L0Q7W1AA		LCS Lot-Sample#: A0D290000-431		
	6.5	6.4	No Units	100	SW846 9045A	04/27/10	0119431
			Dilution Factor: 1				
Cyanide, Total			Work Order #: L09VH1AC		LCS Lot-Sample#: A0E100000-227		
	0.38	0.37	mg/L	96	SW846 9012A	05/10/10	0130227
			Dilution Factor: 1				
Total Solids (Residue)			Work Order #: L0WL21AC		LCS Lot-Sample#: A0E030000-092		
	280	280	mg/L	103	MCAWW 160.3	05/03-05/05/10	0123092
			Dilution Factor: 2				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A0D290512 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide		Work Order #: L0TQH1AC	LCS Lot-Sample#: A0D300000-302		
	103	(70 - 130)	SW846 9030B/9034	04/30/10	0120302
		Dilution Factor: 1			
Corrosivity		Work Order #: L0Q7W1AA	LCS Lot-Sample#: A0D290000-431		
	100	(97 - 103)	SW846 9045A	04/27/10	0119431
		Dilution Factor: 1			
Cyanide, Total		Work Order #: L09VH1AC	LCS Lot-Sample#: A0E100000-227		
	96	(69 - 118)	SW846 9012A	05/10/10	0130227
		Dilution Factor: 1			
Total Solids (Residue)		Work Order #: L0WL21AC	LCS Lot-Sample#: A0E030000-092		
	103	(88 - 111)	MCAWW 160.3	05/03-05/05/10	0123092
		Dilution Factor: 2			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A0D290512 **Matrix.....:** WATER
Date Sampled...: 04/27/10 13:24 **Date Received..:** 04/28/10

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT		UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-Soluble Sulfide			WO#: L0NXD1G8-MS/L0NXD1G9-MSD			MS Lot-Sample #: A0D280564-004				
	ND	9	6	N	mg/L	69		SW846 9030B/9	04/30/10	0120301
	ND	9	7		mg/L	78	12	SW846 9030B/9	04/30/10	0120301
			Dilution Factor: 1							
Cyanide, Total			WO#: L0VFM1AQ-MS/L0VFM1AR-MSD			MS Lot-Sample #: A0D300616-001				
	ND	0.040	0.029		mg/L	73		SW846 9012A	05/10/10	0130227
	ND	0.040	0.031		mg/L	76	4.7	SW846 9012A	05/10/10	0130227
			Dilution Factor: 1							

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A0D290512 **Matrix.....:** WATER
Date Sampled...: 04/27/10 13:24 **Date Received..:** 04/28/10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-Soluble Sulfide		WO#: L0NXD1G8-MS/L0NXD1G9-MSD				MS Lot-Sample #: A0D280564-004	
	69 N	(75 - 125)			SW846 9030B/9034	04/30/10	0120301
	78	(75 - 125)	12	(0-20)	SW846 9030B/9034	04/30/10	0120301
		Dilution Factor: 1					
Cyanide, Total		WO#: L0VFM1AQ-MS/L0VFM1AR-MSD				MS Lot-Sample #: A0D300616-001	
	73	(42 - 140)			SW846 9012A	05/10/10	0130227
	76	(42 - 140)	4.7	(0-20)	SW846 9012A	05/10/10	0130227
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A0D290512 **Work Order #...:** L0KC9-SMP L0KC9-DUP **Matrix.....:** SOLID

Date Sampled...: 04/26/10 14:00 **Date Received..:** 04/27/10

% Moisture.....: 72

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Corrosivity						SD Lot-Sample #: A0D270416-001		
	9.0	9.0	No Units	0.11	(0-20)	SW846 9045A	04/27/10	0118071

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A0D290512 **Work Order #...:** L0NXD-SMP L0NXD-DUP **Matrix.....:** WATER

Date Sampled...: 04/27/10 13:24 **Date Received..:** 04/28/10

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Solids (Residue)						SD Lot-Sample #: A0D280564-004		
	980	970	mg/L	1.1	(0-20)	MCAWW 160.3	05/03-05/05/10	0123092

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A0D290512 **Work Order #...:** L0QN1-SMP **Matrix.....:** WW
L0QN1-DUP
Date Sampled...: 04/26/10 10:00 **Date Received..:** 04/27/10

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Solids (Residue)						SD Lot-Sample #: A0D290512-001		
	270	280	mg/L	1.1	(0-20)	MCAWW 160.3	05/03-05/05/10	0123092

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A0D290512 **Work Order #...:** L0QLM-SMP L0QLM-DUP **Matrix.....:** WATER

Date Sampled...: 04/28/10 10:45 **Date Received..:** 04/29/10

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Flashpoint						SD Lot-Sample #: A0D290507-001		
	>180	>180	deg F	0.0	(0-20)	SW846 1010	05/10/10	0130398

Dilution Factor: 1

CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF 1

ID # Nº D 7604

SSOW Ref. Code: 056393-001

Required Client Information:

Company: CRA, Inc.	Report To: Paul Wiseman
Address: 14496 Sheldon Rd.	Copy To: see SSOW
Suite 200	Invoice To: Paul Wiseman
Plymouth, MI 48170	P.O.: 4029450
Phone: 734-453-5123	Project Name: 12th St. Landfill
Fax: 734-453-5201	Project Number: 056393-07-0001
Email: pwiseman@craworld.com	

Laboratory:	Test America
Laboratory Location:	North Canton, OH
Laboratory Contact:	Denise Tedder
Requested Due Date:	TAT: Standard
QA/QC Requirements:	see SSOW

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

Analysis and Method

Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	TCLP VOCs	TCLP SVOC	TCLP Pesticides	TCLP Herbicides	TCLP Metals	PCBs	Reactive Cyanide	Reactive Sulfide	Corrosivity (pH)	Ignitability (Flash Pt)	Total Solids	Remarks/Lab ID
1. WW-056393-012610-JMD-001	WW	01/26/10	1000	3	3						X	X	X	X	X	X	X	X	X	X	X	
2.																						
3.																						
4.																						
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						
11.																						
12.																						
13.																						
14.																						
15.																						
TOTAL NUMBER OF CONTAINERS																						

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
FedEx	1	Jodi Dembowske / CRA	4/26/10	1400		4/27/10	900
AIRBILL NO.							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name: Jodi Dembowske

Sampler Signature: Jodi Dembowske Date: 4/26/10

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampler Copy

REV. 0 (6/04)

CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF 1

ID # Nº D 7588

SSOW Ref. Code: 056393-001

Required Client Information:

Company: CRA, Inc.	Report To: Paul Wiseman
Address: 14496 Sheldon Rd.	Copy To: See SSOW
Suite 200	Invoice To: Paul Wiseman
Plymouth, MI 48170	P.O.: 4029450
Phone: 734-453-5123	Project Name: 12th St LF
Fax: 734-453-5201	Project Number: 056393-07-0001
Email: pwiseman@craworld.com	

Laboratory:	Test America
Laboratory Location:	North Canton OH
Laboratory Contact:	Denise Heckler
Requested Due Date:	TAT: Standard
QA/QC Requirements:	See SSOW

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	Analysis and Method: TCLP VOCs	TCLP SVOCs	TCLP Pesticides	TCLP Herbicides	TCLP Metals	PCBs	Reactive Cyanide	Reactive Sulfide	Corrosivity (pH)	Ignitability (Flash pt)	Total Solids	Remarks/Lab ID
1.	WW-056393-042810-JMD-001	WW	4/28/10		2	2						X	X	X	X	X	X	X	X	X	X	X	
2.																							
3.																							
4.																							
5.																							
6.																							
7.																							
8.																							
9.																							
10.																							
11.																							
12.																							
13.																							
14.																							
15.																							
	TOTAL NUMBER OF CONTAINERS																						

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
Fed Ex	1	Jamie Dembowske / CRA	4/28/10	1510		4/29/10	945
AIRBILL NO.							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

additional volume for sample previously submitted

Sampler Name: Jamie Dembowske

Sampler Signature: Jamie Dembowske Date: 4/28/10

Distribution: WHITE - Fully Executed Copy; YELLOW - Receiving Laboratory Copy; PINK - Shipper; GOLDENROD - Sampler Copy

REV. 0 (6/04)

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** 440290512
North Canton Facility

Client CRA Project 12th St. LF By: (Signature)
Cooler Received on 4/27/10 Opened on 4/27/10
FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other
TestAmerica Cooler # Multiple Coolers ☐ Foam Box ☐ Client Cooler ☒ Other

1. Were custody seals on the outside of the cooler(s)? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 1 Quantity Unsalvageable
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions?
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other
6. Cooler temperature upon receipt 3.7 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☐ No ☒ Were VOAs on the COC? Yes ☐ No ☒

Contacted PM Date by via Verbal ☐ Voice Mail ☐ Other ☐
Concerning

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 121709-HNO_3; *Sulfuric Acid Lot#* 121709-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN/NaOH$. What time was preservative added to sample(s)?

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: 40290512

Client CRA Project 12th St. LF By: (Signature)

Cooler Received on 4-29-10 Opened on 4-29-10

FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other

TestAmerica Cooler # 741624 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☐ Intact? Yes ☐ No ☐ NA ☐
   If YES, Quantity 1 Quantity Unsalvageable
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions?
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other
6. Cooler temperature upon receipt 4.0 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☐ No ☒ Were VOAs on the COC? Yes ☐ No ☒

Contacted PM Date by via Verbal ☐ Voice Mail ☐ Other ☐

Concerning

14. CHAIN OF CUSTODY

The following discrepancies occurred:

Extra Volume for Sample received 4/27/10

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot# 121709-HNO_3; Sulfuric Acid Lot# 082509-H_2SO_4; Sodium Hydroxide Lot# 100108 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-$(CH_3COO)_2ZN$/NaOH.* What time was preservative added to sample(s)?

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT